



THE OHIO STATE UNIVERSITY



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COLLEGE OF EDUCATION

ISSUE FOR 1956 - 1957 SESSIONS

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Arps Hall



The College of Education Offices Are Located Here

Planned Observation



Professional Insights Are Extended Through Guided Classroom Visitations

Practical Experience



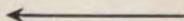
Student Teachers Put Theory Into Practice Under Constructive Supervision

At University School



Main Entrance of the School

●
An Elementary Group Learns by
Working with Science Materials



High School Pupils
Learn Useful Skills
in a Business
Education
Class



Student Leadership



Education Student Council Provides
Participation and Leadership in
College Affairs

Placement

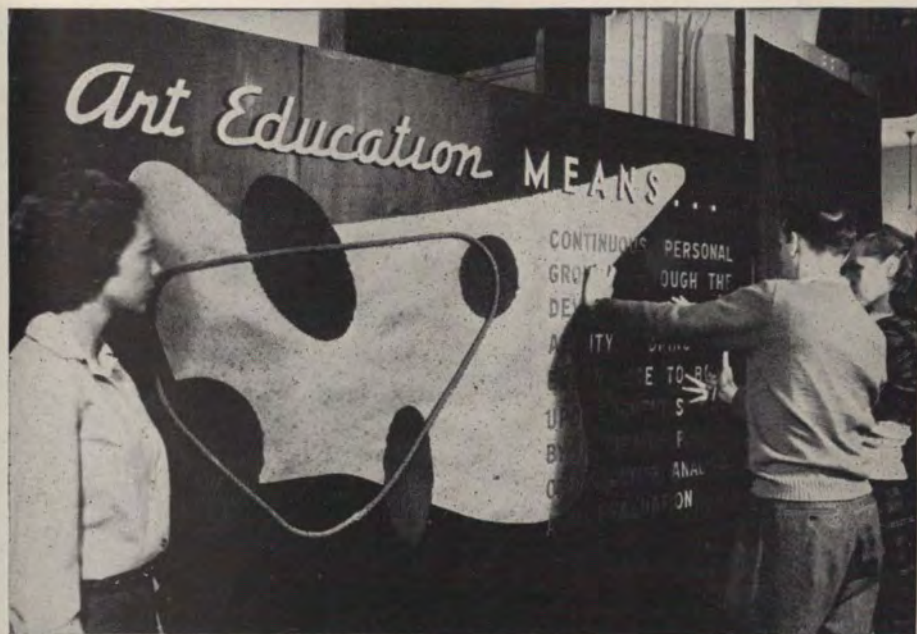
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A School Superintendent Comes to
the Division of Appointments in
Search of a Teacher

Teaching



A College Class in Educational Psychology

For Future Teachers of Art



An Annual Student Exhibition Serves to Synthesize Work of the Year

Graduating Recital, School of Music



The New Auditorium in Hughes Hall

Industrial Arts



Craft Ability Is Kept Alive in an Industrial Age

Occupational Therapy



Student Observes at a Cerebral Palsy Center as Part of Clinical Training

Preparing Physical Education Teachers



University Golf Course—Recreational Opportunities for Students



Student Teaching Under Experienced Direction

Student Teaching



A Fine Arts Major Teaching in a Columbus Junior High School

Experience In A Community Agency



A Student Working in a Columbus Settlement House

COLLEGE OF EDUCATION

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COLUMBUS

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CALENDAR FOR 1956			
JANUARY	FEBRUARY	MARCH	APRIL
S M T W T F S	S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4 5 6 7	1 2 3 4	1 2 3	1 2 3 4 5 6 7
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29 30	27 28 29 30 31	24 25 26 27 28 29 30	29 30 31

UNIVERSITY CALENDAR

1956

SUMMER QUARTER

June 18
June 18
June 19
July 4
July 18
July 24-25
July 25
July 26
August 1

August 2

August 30-31
August 31
August 31
September 1

Orientation Program for all new students begins.
Last day for registration and paying fees before classes begin.
Classes begin, 8:00 A.M.
No classes.
Last day for withdrawal with any refund of fees.
Final Examinations, first term (at last regular class hour).
First term ends, 12 Midnight.
Second term begins, 8:00 A.M.
Schedule cards for Autumn Quarter may be obtained in the Registrar's Office.
Schedule cards for Autumn Quarter may be filed in College Office.
Final Examinations.
Summer Convocation (Commencement), 9:00 A.M.
Summer Quarter ends, 12 Midnight.
Latest day for filing Autumn Quarter schedule cards without penalty.

AUTUMN QUARTER

September 24 to
October 1

October 1
October 2
November 1
November 1

November 2

November 9

November 12
November 22-23-24
December 14-17-18-19-20
December 20
December 20

Orientation Week for all new students. New Freshmen report.
September 24-25-26. New transfer students report September 28.
Last day for registration and paying fees before classes begin.
Classes begin, 8:00 A.M.
Last day for withdrawal with any refund of fees.
Schedule cards for Winter Quarter may be obtained in Registrar's Office.
Schedule cards for Winter Quarter may be filed in College Office.
Latest day for filing Winter Quarter schedule cards without penalty.
Veterans' Day. No classes.
Thanksgiving Vacation. No classes.
Final Examinations.
Autumn Convocation (Commencement), 2:00 P.M.
Autumn Quarter ends, 12 Midnight.

1957

WINTER QUARTER

January 2
January 2
January 3
February 1

February 4

February 2
February 11

February 22
March 11-15
March 15
March 15

Orientation Program for all new students begins.
Last day for registration and paying fees before classes begin.
Classes begin, 8:00 A.M.
Schedule cards for Spring Quarter may be obtained in the Registrar's Office.
Schedule cards for Spring Quarter may be filed in the College Office.
Last day for withdrawal with any refund of fees.
Latest day for filing Spring Quarter schedule cards without penalty.
Washington's Birthday. No classes.
Final Examinations
Winter Convocation (Commencement), 2:00 P.M.
Winter Quarter ends, 12 Midnight.

SPRING QUARTER

March 25
March 25
March 26
April 24
May 1

May 2

May 9

May 30
June 3-7
June 7
June 7

Orientation Program for all new students begins.
Last day for registration and paying fees before classes begin.
Classes begin, 8:00 A.M.
Last day for withdrawal with any refund of fees.
Schedule cards for Summer Quarter may be obtained in the Registrar's Office.
Schedule cards for Summer Quarter may be filed in the College Office.
Latest day for filing Summer Quarter schedule card without penalty.
Memorial Day. No classes.
Final Examinations.
Spring Convocation (Commencement).
Spring Quarter ends, 12 Midnight.

June 18

Summer Quarter (1957) classes begin.

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1955-1956

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* On leave, October 1, 1955-September 30, 1956.

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ROBERT WHERRY, B.S., M.A., Ph.D.	<i>Professor of Psychology</i>
DELOS D. WICKENS, M.A., Ph.D.	<i>Professor of Psychology</i>
ROBERT D. WILLIAMS, A.M., Ph.D.	<i>Professor Emeritus of Psychology</i>
M. EMETT WILSON, A.M., Ph.D.	<i>Professor of Music Theory</i>
DOROTHY WIRTHWEIN, B.S., M.A.	<i>Professor of Physical Education</i>
NORMAN WOELFEL, B.S., M.A., Ph.D.	<i>Research Associate and Professor of</i> <i>Education in the Bureau of Educational Research</i>

- LAURA ZIRBES, A.M., Ph.D. *Professor Emeritus of Education*
 NAOMI ALLENBAUGH, B.Sc. in Edu., M.A. *Associate Professor of Physical Education*
 CLARA M. BANCROFT, M.Sc. *Associate Professor of Home Economics*
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 ROBERT O. CHADEAYNE *Associate Professor of Fine Arts*
 MARION J. CONRAD, B.S. in Edu., M.A., Ph.D. *Research Associate and Associate Professor in the Bureau of Educational Research*
 HERBERT L. COON, B.A., M.A., Ph.D. *Associate Professor in University School*
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 GEORGE HADDAD, A.T.C.M., L.T.C.M., B.M. *Associate Professor of Music*
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 ROBERT W. HAWS, B.S. in Edu., M.A., Ph.D. *Associate Professor of Education*
 FRIEDA HELLER, A.B., B.S.L.S., M.S.L.S., *Associate Professor and Librarian of the University School*
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 OLWEN JONES, B.Sc. in Edu., M.A. *Associate Professor of Music*
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 ROBERT D. KING, B.F.A., M.A. *Associate Professor of Fine Arts*
 CHARLES R. KOVACIC, M.A., Ed.D. *Associate Professor of Physical Education*
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 WILLIAM MORROW, A.B., M.P.H., M.D. *Associate Professor, University School*
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 HARRY W. ROGERS, B.A., M.A. *Associate Professor of Romance Languages*

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ELSIE ALBERTY, B.S., M.A., Ph.D.	<i>Assistant Professor in University School</i>
HELEN P. ALKIRE, B.Sc. in Edu., M.A.	<i>Assistant Professor of Physical Education</i>
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BRUCE BENNETT, Ph.D.	<i>Assistant Professor of Physical Education</i>
SIDNEY CHAFETZ, B.F.A.	<i>Assistant Professor of Fine Arts</i>
ROBERT COLLINS, B.F.A., M.F.A.	<i>Assistant Professor of Fine Arts</i>
JOHN CORBALLY, B.S., M.A., Ph.D.	<i>Assistant Professor of Education</i>
VIRGINIA CRAFTS, B.A., M.A.	<i>Assistant Professor of Physical Education</i>
CHARLES CSURI, B.Sc., M.A.	<i>Assistant Professor of Fine Arts</i>
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GAIL FARWELL, B.S., M.S., Ed.D.	<i>Assistant Professor of Education</i>
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PETER FYFE, B.Mus., M.Bus., M.S.M.	<i>Assistant Professor of Music</i>
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	<i>Associate Director of Personnel Research Board</i>
CHARLOTTE HUCK, B.S., M.A., Ph.D.	<i>Assistant Professor of Education</i>

* On leave, Autumn and Winter Quarters, 1955-1956.

* On leave, 1955-1956.

- RUTH BECKEY IRWIN, B.S., M.A., Ph.D. Assistant Professor in
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- CLYDE H. JONES, B.S. in Edu., M.S., Ph.D. Assistant Professor of Botany
- SIDNEY M. KAPLAN, A.B., M.A., Ph.D. Assistant Professor of Fine Arts
- PHYLLIS KRUMM B.F.A., M.A. Assistant Professor of Fine Arts
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- MILTON A. LESSLER, Ph.D. Assistant Professor of Physiology
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- MYLIN H. ROSS, B.Sc. in Edu., M.A. Dean of Men
- EVELYN A. RUPERT, B.Sc. in Edu., M.A. Assistant Professor of Physical
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- ESTHER SCHATZ, A.B., M.A. Assistant Professor, University School
- SUZANNE SCHROEDER, A.B., A.M. Assistant Professor of Physical Education
- MILDRED SCHWAGMEYER, O.T.R., B.S. in O.T. Assistant Professor of Occu-
pational Therapy
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- MARY TOLBERT, B.S., M.A. Assistant Professor, University School
- LOREN R. TOMLINSON, B.S., M.A., Ph.D. Assistant Professor of Education
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- MARY M. YOST, B.A., M.S., Ph.D. Assistant Professor of Physical Education

* Resigned, September 30, 1955.

† Resigned, November 30, 1955.

MARGUERITE ANDERSON, B.S.	<i>Instructor in University School</i>
ELEANOR BECKER, B.Sc.	<i>Instructor in University School</i>
BETSY BOUSFIELD, B.S., M.A.	<i>Instructor in Physical Education</i>
ROBERT M. BOYD, B.A., M.A.	<i>Instructor in University School</i>
JUNE HOUGHTON BROOKS, B.Sc. in Edu., M.A.	<i>Student Counselor;</i>
<i>Instructor in Education</i>	
RUTH BULLOCK, B.Sc., M.A.	<i>Instructor in University School</i>
ALICE A. CAVE, B.M.	<i>Instructor in Music</i>
CLELL COX, B.Sc., M.A.	<i>Instructor in University School</i>
LEWIS EVANS, A.B., M.A.	<i>Instructor in the University School</i>
STANLEY FISTICK, B.F.A.	<i>Instructor in Fine Arts</i>
FLORENCE L. FOGLE, R.N., B.S., M.A.	<i>Instructor and Coordinator of School</i>
<i>Health for University Advisory Committee on School and Public Health</i>	
<i>Education</i>	
EFRIM FRUCHTMAN, B.S., M.A.	<i>Instructor in Music</i>
HAZEL GIBBONY, B.A., M.A.	<i>Research Associate and Instructor in the Bureau</i>
<i>of Educational Research</i>	
GLENN H. GOODMAN, B.A., M.A.	<i>Instructor in German</i>
EVELYN GORDON, B.S., M.S.	<i>Instructor in University School</i>
†H. JUNE HACKETT, B.Sc. in Edu., M.A.	<i>Instructor in Physical Education</i>
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MARGARET KOSTE, B.Sc. in Edu., M.A.	<i>Instructor in Education</i>
THERON MCCLURE, B.A., M.A.	<i>Instructor in Music</i>
M. ISABEL MILLER, B.S. in Edu., M.A.	<i>Instructor in Education</i>
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WAYNE RAMSEY, B.S. in Edu., M.A.	<i>Instructor in Music</i>
JEAN RITTENOUR, B.Sc. in Agr.	<i>Instructor in Physical Education</i>
FRED SCHMIEDER, B.S., M.A.	<i>Instructor in University School</i>
A. JEANETTE SEXTON, B.Sc. in Edu., M.A.	<i>Instructor in Music</i>
RUTH SEEGER, B.A.	<i>Research Librarian and Instructor</i>
<i>in the Bureau of Educational Research</i>	
EUGENE SMITH, B.S., M.A.	<i>Instructor in University School</i>
BLANCHE P. SOHL	<i>Instructor in Physical Education</i>
CHARLES L. SPOHN, JR., B.M., M.A.	<i>Instructor in Music</i>
ADRIAN STILSON, A.B., M.A.	<i>Instructor in University School</i>
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<i>of Student Personnel; Instructor in Education</i>	
MARGARET A. VESEY, B.S., B.S. in Edu., M.A.	<i>Research Associate and</i>
<i>Instructor in the Bureau of Educational Research; Assistant Chairman,</i>	
<i>Division of Appointments</i>	
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GEORGE H. WILSON, B.Sc. in Edu., M.Mus.	<i>Instructor in Music</i>
H. LOUISE EDMONDSON, A.B., B.S. in L.S.	<i>Librarian</i>

* Resigned, September 30, 1955.

† Resigned, October 1, 1955.

I. THE UNIVERSITY AND ITS SERVICES

LOCATION

The Ohio State University is situated some two and one-half miles north of the center of the city of Columbus, the capital of Ohio, and a city of over 400,000 persons. The main campus of the University lies west of High Street between Eleventh and Woodruff Avenues. From the Union Station or the center of Columbus (Broad Street and High Street) the campus may be reached by either the North High Street or the Neil Avenue busses.

The University is supported primarily by appropriations from the State government, with Federal assistance. The University has some 2,334 total acres of land, with 417 acres in the campus, 383 in the University airport, 295 in the golf course, and 1,239 acres in farms. The total value of the land, building, and equipment of the University is currently some \$78,468,218.53. The University has its own radio-television station (WOSU-TV) and a daily student-operated newspaper.

HISTORY

The Ohio State University was founded in 1870 as a land-grant institution and designated as the Ohio Agricultural and Mechanical College. This new school admitted its first students in 1873. The University's present name was received in 1878, which was also the year the first class was graduated. The original organization of the University consisted of ten departments. By 1883, the University was organized into four schools: Agriculture, Arts and Philosophy, Engineering, and Science. In 1896, six independent colleges were organized: Agriculture, Arts, Philosophy and Science, Engineering, Law, Pharmacy, and Veterinary Medicine. The Graduate School was created in 1902 as a division of the College of Arts, Philosophy and Science, and became a separate school in 1911. Currently, slightly more than three-quarters of a century later, there are some eighty departments of instruction and a faculty numbering 1400 persons. More than 250 different programs of study ranging from a broad liberal education to many specialized fields and professions are offered by the University.

THE PRESENT ORGANIZATION OF THE UNIVERSITY

The present organization of the University represents both administrative convenience and educational design. The departments of instruction of the University are grouped into divisions termed "Colleges." The Ohio State University now comprises ten Colleges and a Graduate School, each under the administration of a Dean and College Faculty, as follows: Graduate School, College of Agriculture (including the School of Home Economics), College of Arts and Sciences (including the School of Journalism and the School of Optometry), College of Commerce and Administration (including the School of Social Administration), College of Dentistry, College of Education (including the School of Fine and Applied Arts and the School of Music), College of Engineering (including the School of Architecture and Landscape Architecture and the School of Mineral Industries), College of Law, College of Medicine (including the School of Nursing), College of Pharmacy, College of Veterinary Medicine.

Each of the various schools and colleges has its own bulletin which may be obtained by writing to the University Examiner, The Ohio State University, Columbus 10, Ohio.

Graduate study may be undertaken in most of the departments of the University. Such work is under the direction of the Graduate Council and the Chairman of the department concerned. Students desiring to do graduate work should register in the Graduate School.

The University also conducts a Twilight School for the benefit of persons occupied during the day but desirous of continuing their education after five o'clock or on Saturday forenoon. Full college credit courses are regularly offered, and it is possible to combine day classes and Twilight School work. Many of the courses listed in this bulletin are likewise offered in the Twilight School and a few departments have developed courses for Twilight School students. For complete information, consult the office of Twilight School, 102 Administration Building.

THE QUARTER SYSTEM

The University School year is divided into four Quarters—Summer, Autumn, Winter, and Spring. Each of these Quarters comprises approximately eleven weeks. The work of the Autumn Quarter is completed before the Christmas holidays, thus eliminating interruption of studies. The Spring vacation constitutes a full week between the Winter and Spring Quarters. By attending the Summer Quarter regularly, in addition to the other three Quarters, a student may complete the usual four years of work toward a degree in only three calendar years.

The Summer Quarter (announcements for which are presented in a separate Summer Quarter Bulletin) is divided into two equal terms of approximately six weeks each for the convenience of teachers and others who cannot attend the full Quarter. A number of courses in various departments are offered which may be completed in a single term.

New students may enroll in the University at the beginning of any of the four Quarters, or either of the Summer Terms.

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Each of the various schools and colleges has its own bulletin which may be obtained by writing to the University Examiner, The Ohio State University, Columbus 10, Ohio.

Graduate study may be undertaken in most of the departments of the University. Such work is under the direction of the Graduate Council and the Chairman of the department concerned. Students desiring to do graduate work should register in the Graduate School.

II. UNIVERSITY ADMISSION AND REGISTRATION

APPLICATIONS FOR ADMISSION

The admission of all students to the University is in charge of the Entrance Board. This Board determines the credits that shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants.

Applications for admission to the University will be received by the Entrance Board not later than ten days before classes begin for any Quarter. Application made after this date but before commencement of classes will be charged a late application fee of \$5. No application will be received later than the day before classes begin. Exceptions to these provisions may be made only upon the approval of the Vice-President for Student Affairs. However, applications for admission to the Twilight School may be submitted as late as the day of commencement of classes. (Rule 144)

Correspondence relating to admission should be addressed to the University Examiner, The Ohio State University, Columbus 10, Ohio.

ADMISSION AS AN UNDERGRADUATE STUDENT

For admission as a regular undergraduate student, a candidate must be a graduate of a first grade High School (or equivalent preparatory School), or he must have passed equivalent entrance examinations. He must present a minimum of fifteen units, and he must meet the special requirements of the college he desires to enter subject to such deficiencies (conditions) as that college may permit.

It is essential that entering students possess a reasonable proficiency in English grammar and Composition and in mathematics including algebra. If the entering student lacks such proficiency as demonstrated by placement tests, the student must correct this weakness by registering and passing designated courses (a special fee is required for each review course). The number of credit hours required in these review courses will be added to the total hours for graduation.

English—The student needing to schedule a review course must pass the course before registering for any English course. (See English 400 on page 161).

Mathematics—The student needing to schedule a review course must pass the course before registering for Physics or Chemistry or any other course in Mathematics or within three Quarters after entering. (See Mathematics 400 and 401 on page 205.)

All of the course work offered by the College is based upon the assumption that the student has a background and proficiency acquired before admission to the College which will permit him to begin the courses required by his curriculum. The student whose preparation is inadequate may be required to take courses in College which will not count toward the fulfillment of graduation requirements. On the other hand the student whose pre-college preparation is superior may find himself eligible to receive "Em" (proficiency examination) credit counting toward graduation and may thus receive his degree in less than the normal time required for his curriculum or have more time for electives.

Additional requirements for certain college curricula and recommendations for high school preparation are found on succeeding pages.

ADMISSION WITH ADVANCED STANDING—TRANSFER STUDENTS

An applicant who comes from an approved college and submits through his college registrar an official and explicit transcript describing his entrance credits, his courses of study and scholarship and giving evidence of good

standing, will be admitted to the University, provided he has maintained at least an average scholastic record. If the applicant is deficient in high school units the deficit will be made up from his college credits.

If no high school units are presented, one full year of college credits (forty-five Quarter or thirty Semester hours) will be used to satisfy the entrance requirements.

A special application blank for students who desire to enter with advanced standing will be forwarded upon request addressed to the University Examiner's office.

ADMISSION AS AN AUDITOR

An undergraduate or professional student may audit a course, without additional fee, upon approval of the professor in charge, the Head of the Department or School, and the Dean of the College.

A graduate student may audit a course without additional fees, upon approval of an adviser, provided the instructor in charge of the course assents.

One not a student in the University may be admitted as an auditor by the University Examiner after satisfying all entrance requirements and paying the fees required.

ADMISSION AS A TRANSIENT STUDENT

To be considered for admission as a transient student, the candidate must present a brief, definite program of study, endorsed by the President of the University or the Dean of the College. The necessary forms can be obtained from the Office of the Entrance Board. His registration as a transient student is limited to one Quarter. Where this and all other pertinent matters are satisfactory to the University Examiner, the candidate may be admitted unless there is objection by the College to which he seeks admission, in which case the question of his admission shall be determined by the Entrance Board.

ADMISSION AS A PROFESSIONAL STUDENT

A candidate for admission as a regular or special student in a professional program must meet the particular preprofessional requirements of the college he desires to enter, subject to such deficiencies (conditions) as that college may permit.

ADMISSION OF SPECIAL STUDENTS OF MATURE YEARS

A person of mature years who is unable to meet the entrance requirements in all respects, under certain circumstances, may be permitted to matriculate for specified courses for which he can demonstrate adequate qualifications. The University Examiner is authorized to interpret the phrase "of mature years" to apply to demobilized students not less than 19 years old and to modify this interpretation, or apply it to other students, within the spirit of these recommendations. Inquiry concerning such admission should be addressed to the Entrance Board, and to receive consideration must reach the Board not less than ten days in advance of the opening of the Quarter. A personal interview with an applicant for admission as a special student is required.

For admission as a special undergraduate student, a candidate must be of mature years, and must satisfy the University Examiner and the Dean of the College that he is qualified to undertake the special program he desires.

IRREGULAR STUDENTS

Those students who are unable to carry the full schedule because of outside work, impaired health, or for other valid reasons should follow a reduced schedule and hence allow more than the usual period to complete their curricula.

INTER-COLLEGE TRANSFERS

Students in good standing in other colleges of the University who wish to transfer to this college should consult a counselor in the College Office before completing the transfer, and before submitting a schedule card for approval. The official transfer from one college to another is made by application to the Entrance Board.

Students who have been denied further registration in one college of the University may not be admitted to another college on this campus except by petition approved by the Executive Committee of the college they wish to enter.

ADMISSION OF VETERANS

The United States Veterans Administration has approved the Ohio State University as an institution for training under Public Laws 16 and 894 (Vocational Rehabilitation Act), Public Law 346 (Servicemen's Readjustment Act of 1944) and Public Law 550 (Veterans' Readjustment Assistance Act of 1952). The University, accordingly, encourages the enrollment of demobilized students and offers its facilities to those qualified for attendance to the full extent of its accommodations in each of its colleges and schools. The rules for admission and continued registration for demobilized students are, in general, the same as those for other students. The regional office of the Veterans Administration located in Cincinnati, Ohio, has charge of training in Columbus. Veterans desiring information relative to their eligibility under laws relating to veterans should contact the Regional Office of the Veteran's Administration in Cincinnati, Ohio, or the Contact Office, 48 Starling Street, Columbus, Ohio.

The Servicemen's Readjustment Act, as amended, provides that a course of education or training shall be initiated before the termination of four years after the date of discharge or by July 25, 1951, whichever is the later, and that such education or training cannot be afforded beyond July 25, 1956, except for those veterans who enlisted under the Voluntary Recruitment Act of October 6, 1945.

Those veterans eligible to continue training under the provisions of Public Law 346 during the year 1956-1957 should inquire for instructions before registration at the Veterans' Center, Administration Building.

Each veteran who desires to attend Ohio State University under Public Law 550 should apply to the Veterans Administration for a Certificate of Education and Training. At the same time he should proceed with his registration in the University in the same manner as any regular student. After the veteran's registration in the University has been completed and his fees have been paid he should bring his PAID fee card, schedule card, and Veterans Administration Certificate for Education and Training to the Veteran's Center, lobby of the Administration Building. Instructions will be given there concerning the required monthly certificates to the Veterans Administration.

Particular attention is called to the following statement from the Veterans Administration Regional Office. "The Veterans' Readjustment Assistance Act of 1952, Public Law 550, 82nd Congress, provides that a veteran must actually commence an active pursuit of an approved program of training prior to August 20, 1954, or within three years of his discharge date, whichever is the later date. He must be in actual pursuit of his program on his delimiting date, except where his attendance is interrupted for normal summer vacations or for other reasons deemed by the Veterans Administration to be beyond his control; and except that he may suspend pursuit of his program for a period or periods of not more than twelve consecutive months in length. This law also provides that no education or training shall be afforded a veteran beyond a date eight years following the end of his basic service period."

LIMITATION OF ENROLLMENT

The Ohio State University Board of Trustees has adopted a policy of giving preference in admission to Ohio residents, particularly veterans. However, nonresident high school graduates who rank in the upper half of their classes and advanced students with records averaging above "C" will be considered for admission. These well-qualified nonresident students will be accepted in numbers consistent with the facilities of the University.

REGISTRATION PROCEDURE

Schedule cards for registration are distributed from the Registrar's Office on the second floor of the Administration Building. Under the Quarter plan the student formally schedules his program of studies for only one Quarter at a time, although he may informally plan several years ahead with his adviser.

Students who are in residence in any undergraduate college of the University during the Spring or Summer Quarter must present their study programs for the Autumn Quarter before September 1. Such students who are in residence during the Autumn or Winter Quarter are required to present their study programs for the following Quarter at dates announced during these Quarters. Failure to comply with this rule will result in the assessment of a fee of \$1 for each day of delay, the maximum being \$5. (Rule 164). Students not in residence may register either by mail or in person.

Changes in approved schedule in undergraduate colleges will be made only upon approval of the College Office; provided that a student may add a course to his schedule after the first Saturday noon after classes begin only with the permission of the instructor, the chairman of the department, and the dean of the student's college. To register for a course after the first week of a Quarter, a student must obtain written permission from the instructor and from the chairman of the appropriate department. Such a student is liable to have his total schedule diminished by one full course below the normal load. Students are responsible for the courses appearing on their approved schedule cards.

PAYMENT OF FEES

Fees may be paid as soon as fee cards have been received by the student from the Registrar. Students are required to pay their fees each Quarter before the day designated in the University Calendar for classes to begin. Any student who fails to meet this requirement will be assessed a penalty of \$1 for each succeeding day or fraction thereof (with a maximum of \$10) unless excused by the Registrar. Students should report promptly to their classes on the first day that classes are scheduled. Students who have registered sufficiently early usually receive fee cards approximately three weeks prior to the opening of the Quarter. It is to the advantage of all students to register as early as possible.

All Quarterly bills, fees, and laboratory deposits required from students must be paid at the Bursar's Office previous to and as a condition of registration for that Quarter. (Rule 160)

On the first day of classes each Quarter each student will be required to demonstrate his right to enrollment in his scheduled classes by presentation of a schedule card and paid fee card, unless the instructor has in his possession at the time a roll card for that student. (Rule 160)

Registration and payment of fees are required of all students by the close of the business day next preceding the first day of classes each Quarter. Failure to meet this requirement will result in a penalty assessment of \$1 for each succeeding day, or fraction thereof, unless excused by the Office of the Registrar. The maximum penalty for late registration and payment of fees shall be: in the Twilight School, \$5; elsewhere, \$10. (Rule 161)

The second Saturday noon of each Quarter shall be the final deadline for fee payments. Individual exceptions to this provision may be made only upon the approval of the Vice-President for Student Affairs.

ORIENTATION PROGRAM

Orientation Programs are planned for each of the four Quarters of the school year. In January, March, and June of each year, one-day Orientation programs are held on the Mondays preceding the opening of classes on Tuesdays for these three Quarters. In September a more comprehensive program called Orientation Week occupies the week preceding the opening of classes.

ATTENDANCE IS REQUIRED

All new Freshmen in the undergraduate colleges and schools (and new students in the Dental Hygiene and Dental Laboratory Technology curricula) are expected to take part in the full Orientation Program. Autumn Quarter Freshmen report on Monday, Tuesday, and Wednesday starting days for Orientation Week projects, according to group schedules mailed to them early in September.

Autumn Quarter transfer students have a shorter program of required Orientation projects beginning at 8:00 a. m. on Friday of Orientation Week.

Twilight School students are excused from the Orientation Program. Transient students are excused from the Psychological Examination, but not from the Physical Examination and Chest X-ray.

Short programs, as shown in their respective bulletins, are required by rules 151 and 152 for new students in the Graduate and professional schools and colleges.

Ordinarily, excuses from required Entrance Projects of the Orientation Week Program are not granted, and employed students are expected to make plans to take part in projects when the Orientation Program starts. Printed instructions will be mailed two weeks before the Quarter begins. All new students are expected to follow the instructions in this program in every detail. Tests are essential to assure places in classes and registration will not be considered complete until all *required entrance projects* have been finished.

Inquiries about these Orientation Programs should be addressed to Director, Orientation Program Office, University Hall, East Basement Entrance (campus telephone 104.)

Two-day summer orientation conferences are also offered to new Freshmen. They are optional and conducted by the University Counseling and Testing Center. Freshman Camps are offered on the weekend before Orientation Week. They are operated by the University YMCA-YWCA, and several church foundations. Freshman orientation courses and advisory services are provided by the five undergraduate colleges as additional parts of the University's orientation program.

PHYSICAL EXAMINATION FOR NEW STUDENTS

A thorough physical examination is required of all undergraduate students when they enter the University. Physical conditions representing deviations from the normal are noted and students are given follow-up service and counselling. Individual programs are arranged in order that students with disabilities are placed in situations which will enable them to benefit most from their University experiences.

Because appointments with the Department of Physical Education must accommodate a large number of students within a limited time, a penalty of \$1 will be assessed either for failure to keep an appointment or for a change in the assigned date of the physical examination.

REQUIRED COURSES

Each college has certain requirements which must be met by every student seeking to earn a degree in that college. The specific course requirements will be found, for each of the curricula administered by this College in succeeding pages of this Bulletin. In addition to these, the University has established certain requirements outlined below.

REQUIRED COURSES FOR MEN STUDENTS

All men students, entering any of the undergraduate colleges of the University are required to schedule: 1) two hours of Military or Air Science, or three hours of Naval Science, every Quarter they are in residence until a total of twelve (Naval Science, eighteen) credit hours has been earned. 2) one hour of Physical Education every Quarter until a total of three credit hours has been earned. 3) one hour of Hygiene during one of the first three Quarters of residence, and if necessary each Quarter thereafter until one credit hour has been earned.

REQUIRED COURSES FOR WOMEN STUDENTS

All women students entering any of the undergraduate colleges are required to schedule: 1) one hour of Physical Education every Quarter they are in residence until a total of six credit hours has been earned. 2) one hour of Hygiene during one of the first three Quarters of residence, and, if necessary, each Quarter thereafter until one credit hour has been earned.

EXCUSES FROM REQUIRED COURSES

The College in which a student is enrolled may excuse a student from course requirements imposed by that College.

The requirements of Physical Education, Hygiene, and Military Science, are University requirements. The President and the departments of instruction directly concerned may grant by Faculty Regulation excuses from these courses. Excuse from Military or Air Science is granted generally to men who are: 1) over twenty-three years of age; 2) not physically fit for ROTC; 3) veterans with equivalent military training; 4) aliens; 5) transfer students who enter the University with 90, or more, hours of credit.

PROFICIENCY AND PLACEMENT TESTS

Taking courses in college is not the only way of learning a subject. Because the Ohio State University recognizes this fact, its students may arrange early in their college residence, with the chairman of any department, to take proficiency tests covering work done (1) either by exceptionally good preparation in high school, (2) or by independent study outside of class.

Placement tests (to test the adequacy of high school preparation and place the student in the highest course which he is able to carry with a fair chance of success) are regularly scheduled during Orientation Week and at the beginning of other Quarters in Chemistry, English, Mathematics, German, French, Spanish, and Hygiene. Students may take placement tests in other departments of instruction to establish their eligibility for course work of a more advanced nature than their previous record might presume.

The student able to pass these tests may be granted "Em" (examination) credit if his work is of "A" or "B" quality. The University grants up to a total of thirty credit hours upon the basis of such examination. Thus a student may considerably reduce his requirements and may either graduate earlier or use the time saved to take more elective work.

The student should not buy textbooks until he knows the results of these tests. Indeed, because textbooks are sometimes changed from Quarter to Quarter, the student should never purchase books until he has been advised by his instructors.

The University Book Store is located in the East Basement of Derby Hall.

GRADUATE CREDIT FOR UNDERGRADUATES

An undergraduate student who has completed three years of work and whose full time is not required for the completion of work for his baccalaureate degree, may select certain courses for graduate credit provided his cumulative point-hour ratio is 2.75 or above. He must obtain permission from the instructor in charge of the course, from the Secretary of the College and from the Office of the Graduate School before registering for the courses. A grade of "B" or better must be received in such courses in order to obtain graduate credit. A student who meets these requirements and petitions for graduate credit cannot use this as graduate credit until he is admitted to the Graduate School and until the Department in which he wishes to specialize accepts the work as graduate credit. Not more than fifteen hours of such work may be counted toward an advanced degree.

REGISTRATION OF STUDENT AUTOMOBILES

In the interest of safety and orderly traffic on the Ohio State University campus, certain regulations have been set up by the Board of Trustees.

All motor-driven vehicles driven by students, regardless of ownership, *must be registered* on their schedule cards in the provided space. Registration should be made at the time the student enrolls for University work each Quarter, or at the time he secures access to the car. Whether driven frequently or on infrequent occasions, car registration is required. Failure to register is subject to a \$3 fine. A full statement of parking and traffic regulations is available at the Traffic Department in the Service Building.

Failure to present a violation notification doubles fines as listed.

Credits will be withheld at the end of the Quarter for unpaid fines or unanswered notification.

Students are prohibited from parking on campus except in places designated for student parking.

III. FEES AND EXPENSES

Registration is not complete until all fees have been paid. No student will have any privileges in the classes or laboratories until all fees and deposits are paid, except under special procedure authorized by the President.

Since all fees are due and payable as a part of the student's registration, before the day designated in the University Calendar for classes to begin, no person should come to the University for registration without money sufficient to cover all of his fees and deposits.

A penalty of \$1 for each succeeding day or fraction thereof (with a maximum of \$10) will be assessed for failure to comply with this rule unless excused by the Registrar.

1. Matriculation fee (nonreturnable)

Required of every student on first admission to the University\$ 15.00

2. University fee

Quarter fee for a resident of Ohio..... 75.00

Quarter fee, including nonresident fee, for a nonresident of Ohio 200.00

3. Special University fees

(a) Laboratory deposit. All laboratory supplies are sold to students at the Laboratory Supply Store, McPherson Chemical Laboratory and charged against the deposits. Instructors shall not permit a student to engage in laboratory work unless the student has shown a receipt from the Bursar for the deposit required in the course.

(b) Deposit for military uniform for Freshmen..... 28.00

Note: When checks given for payment of fees are not paid on presentation at bank, registration will be automatically cancelled and receipts given considered null and void.

NONRESIDENTS

Every student who is not a legal resident of the State of Ohio is required to pay a nonresident fee of \$125 each Quarter (or \$63 either term of the Summer Quarter) of his residence in the University in addition to other University fees. The burden of registering under the proper residence is placed upon the student. If there is any possible question as to legal residence the matter should be brought to the attention of the Registrar and passed upon, previous to registration or payment of fees. Any student who registers improperly under this rule shall be required to pay not only the nonresident fee but shall be assessed a penalty of \$10. Students who do not pay this fee within thirty days after they have been notified that the nonresident fee has been assessed against them, will have their registration in the University cancelled.

The rules are as follows:

1. No student shall be considered eligible to register in the University as a resident of the State of Ohio unless he has had a bona fide domicile in the State twelve consecutive months. Domicile is established by acquiring a dwelling place and forming the intent to make the State a permanent home. This intent is not wholly to be inferred from declarations; all pertinent circumstances are to be considered. Accorded the privilege of voting by an election

board does not conclusively establish the fact of domicile. There is a strong presumption that one who comes into the State to attend college has a temporary residence, not a domicile.

2. No student whose domicile was outside the State of Ohio in the year preceding his original enrollment in the University shall be considered a resident unless it can be clearly established by him, that his former domicile has been abandoned for at least twelve consecutive months. No application for resident standing of one whose legal residence is not determined by that of his natural or legal guardian can be considered until the applicant is 22 years of age.

3. No student whose domicile was outside the State of Ohio at any time after his original enrollment in the University shall be considered a resident unless he has established his domicile as stated in paragraph 2.

4. Minors. The domicile of a minor student shall be considered the same as that of his natural or legal guardian, if any, regardless of emancipation. If an Ohio resident is appointed guardian of a nonresident minor the latter shall be considered a nonresident until twelve months after such appointment.

5. Wives. The legal residence of wives shall follow that of husbands.

6. The President will exercise his discretion as to the remission of non-resident fees in the cases of:

- a. Children of members of the United States Army, Navy or Marine Corps, and persons who are orphans or in somewhat similar status.
- b. Nonresident minors for whom an Ohio resident has been appointed guardian.
- c. Aliens.

LIVING ARRANGEMENTS

The President of the University has the authority to supervise living arrangements of students not residents of the city of Columbus and to order the immediate withdrawal of any student from any boarding or lodging house in which the surroundings are undesirable.

MEN'S HOUSING

Baker Hall, a residence for men, houses approximately 600 men on a board and room basis in single, double and triple rooms.

The Stadium Dormitories offer to 620 men low-cost board and room.

The River Road Dormitories provide housing facilities (double and single rooms) for an additional 400 men. One building of these dormitories has been designated as a graduate building for graduate students only. Cafeteria service is available at reasonable rates.

Contracts for board and room are for the academic year at Baker Hall and the Stadium Dormitories.

All of the above mentioned facilities offer housing during the summer Quarter as well as the academic year.

Applications for either of the above accommodations may be made through the business offices of either dormitory, the Director of Men's Housing, 112 Administration Building.

Furnished rooms in private homes in the city of Columbus provides housing for a greater part of the men students. The rates vary from \$30 to \$35 a month for single rooms; \$25 to \$30 for double rooms (per student). One should visit Columbus three to four weeks prior to entering the University to choose a suitable room. A listing of available rooms will be found in Room 112, Administration Building.

BOARD

Board for students is available at a Quarterly rate at Pomerene Refectory. Cafeteria service is also available at Pomerene Refectory and Ohio Union.

THE GEORGE WELLS KNIGHT INTERNATIONAL HOUSE

The George Wells Knight International House, 104 East Fifteenth Avenue, offers desirable living quarters to a limited number of foreign and American students. Applications should be made to the Director of Men's Housing, 112 Administration Building.

MEN'S FRATERNITIES

A large number of men enjoy the advantages of living together in fraternity houses. These Greek letter organizations have for many years maintained establishments which provide excellent rooming and boarding arrangements. They meet the same standards of inspection that are required of the approved houses and are considered as an integral part of the University's housing arrangements. Prospective students who are interested in possible membership should write to the Dean of Men.

WOMEN'S HOUSING

Every woman student, whether undergraduate or graduate, must register with the Dean of Women at her office in Pomerene Hall during the first week of each Quarter.

All living arrangements for women are under the supervision of the Dean of Women. Women students should apply to the Dean of Women for housing accommodations when making application for admission to the University. Under the rules of the faculty, freshman women who are residents of Ohio so far as possible will be placed by the Dean of Women in the University Residence Halls. Freshmen who are admitted after the University Residence Halls are filled are then placed in University Houses or other smaller units of housing.

Freshmen and other students who desire to work for room and board in private homes may make such arrangements, and those who desire to live with relatives in Columbus will be given permission to do so.

After September 10, 1956, housing cannot be arranged for the Autumn Quarter by correspondence. Students or their parents must consult the Dean of Women or her assistant in person for housing accommodations.

FOR FURTHER DETAILED INFORMATION

Booklets and other sources of information about the various kinds of living quarters will be gladly and promptly sent to any one who inquires. Such information will include detailed descriptions of the halls of residence and houses as well as prices for the various types of accommodation. Address requests for booklets to the Dean of Women, Pomerene Hall, The Ohio State University, Columbus 10, Ohio.

MARRIED STUDENTS

Housing for married students constitutes one of the University's most difficult problems. While 350 married veterans will be housed in the family units in the River Road Project, the greater number of married couples must find living quarters in the city of Columbus. Listings of houses and apartments available for rent are posted in the Director of Men's Office, Room 112, Administration Building.

RETURN OF FEES ON WITHDRAWAL

Regular fees are in part returnable in case a student withdraws on account of sickness or for other causes beyond his control, if such withdrawal is made within a period of 29 days in which classes are scheduled after the beginning of the Quarter. Students withdrawing at the request of the University are not entitled to any refund of fees. *The matriculation fee is not considered a part of the regular fees and, therefore, is not returnable.*

Fees will normally be refunded according to the following schedule:

First 5 days during which classes are scheduled—Full fees less \$10

Next 12 days during which classes are scheduled—75% of fees paid

Next 12 days during which classes are scheduled—50% of fees paid

After 29 days during which classes are scheduled—No refund

Permission to withdraw given in writing by the Dean of the College must be presented to the Bursar within the period listed to be eligible for the listed refund.

If exceptionable conditions prevent presentation of withdrawals at the Bursar's Office at the proper time and the student has not been able to attend classes during this time, the case should be referred to the President for his judgment.

No fees will be returned in case of withdrawal of students until 30 days have elapsed from the date of withdrawal.

If fees are paid under mistake of law or fact, they are returnable in full.

Fees are not returnable except as provided in this rule.

Laboratory Deposits. If a student is forced to withdraw from a laboratory course during a Quarter, he must first secure permission from his Dean.

An order for refund for the unexpended portion of the deposit may be obtained by applying at the Laboratory Supply Store, McPherson Chemical Laboratory. The unexpended part of the deposit will be paid at the Bursar's Office on presentation of the order for refund.

WITHDRAWAL PROCEDURE

WITHDRAWAL FROM A COURSE

An enrollee of any undergraduate college who fails to attend a scheduled course before Saturday noon of the first week of classes, may, at the option of the department, be disenrolled immediately from such course. In the event a department chooses to take such action, it will be the responsibility of the department chairman to notify the student's college office. A change ticket removing the course from the student's schedule shall be prepared in the college office and a copy shall be forwarded to the Office of the Registrar. (Rule 168)

A student who withdraws from a course after the beginning of the Quarter must be given a failure in the course unless his withdrawal is approved by the Dean of his College.

If a student requests his dean's permission to withdraw from a course after the first four weeks of the Quarter, the Dean shall not act until he has considered the instructor's report upon the student's standing in the course and any other relevant information that the instructor may be able to furnish. (Rule 135). The student who wishes to withdraw from a course should go to the College Office to secure the appropriate forms for the purpose.

WITHDRAWAL FROM THE UNIVERSITY

A student who desires to withdraw from the University must apply to the Dean of his College for permission to withdraw. If the student leaves the University at any time during the Quarter without communicating with the Dean of his College, he will be marked as having failed in all his courses for the Quarter.

No student may withdraw from the University within two weeks of the beginning of final examinations unless the reports of his instructors show that his record to date is satisfactory.

When a student withdraws from the University during a Quarter his parent or guardian shall be notified of the fact by the Secretary of the College. (Rule 175).

COST OF A YEAR'S WORK

The total cost of a year's work—three Quarters, will depend considerably upon the course pursued. In some courses considerable material is used by the student and this must be paid for by him. The cost of books is an item which varies with the course.

In order to furnish information, there is listed below an estimate of the average payments required by the University for the Freshman year and the estimated cost for room and board at a safe price. Living costs are sometimes reduced slightly where two students occupy the same room and where boarding clubs are economically managed. Fees to the University are paid at the beginning of each Quarter.

ESTIMATE OF EXPENSES FOR THE FRESHMAN YEAR

Matriculation Fee (nonreturnable).....	\$ 15.00
University Fee	225.00
Deposits to cover laboratory materials and breakage.....	48.00
Deposit to cover military uniform.....	28.00
Books	30.00
Room and Board in Private Homes—Men.....	900.00
Room and Board in Dormitories—Men.....	645.00
Room and Board—Women (\$230 a Quarter).....	690.00
<hr/>	
Total (Men in Private Homes).....	\$1246.00
(Men in Dormitories).....	\$ 991.00
(Women)	\$1008.00

In order to meet the necessary expenses of registration, books, required deposits, and one Quarter's payment for room and board, the beginning out-of-town student should come prepared to spend \$250 to \$300 during the first ten days of a Quarter—\$125 more if he is not a resident of Ohio.

STUDENT PERSONAL EXPENSE FUNDS

The incoming student will save himself much time and trouble by taking a few simple precautions in regard to his personal expense money. The student should bring enough cash to cover expenses for several days. If he does not wish to carry cash, he should use travelers checks, as they are readily cashed. If he does bring a check, it should be in the form of a bank draft or cashier's check. The student who has a check should not wait until he has spent all his money before cashing the check for it may take several days to collect it. Be sure that any checks that are for the payment of fees are drawn for the exact amount of the fees.

The following facts concerning the cashing of checks should be borne in mind by parents and prospective students.

(a) The Ohio State University does not cash checks.

(b) Checks for fees will be accepted by the University, but only when the check is drawn for the exact amount of the fees.

(c) Banks do not cash checks for strangers unless the check is endorsed by a customer of the bank or some person of known responsibility. This rule applies to cashier's checks, bank drafts, and certified checks.

The student who intends to use a checking account will find that an account in Columbus will be of more value than an account at home or in some other city. An account with a Columbus bank will provide a safe place for depositing funds, will help create a local credit standing, will furnish a means of depositing and cashing checks, and will help the student to understand banking practices.

IV. SCHOLARSHIP STANDARDS

STUDENT RESPONSIBILITY

The student is responsible for knowing his own standing scholastically in reference to the published regulations and standards of the University and of his college.

Copies of the "University Rules and Regulations for Students" are available at the Registrar's office. Each student should be familiar with the contents of this booklet.

THE MARKING SYSTEM AND POINT SYSTEM

The grade marks given in all Colleges of the University are as follows:

- A— Excellent; for each credit hour, 4 credit points shall be allowed.
- B— Good; for each credit hour, 3 credit points shall be allowed.
- C— Average; for each credit hour, 2 credit points shall be allowed.
- D— Poor; for each credit hour, 1 credit point shall be allowed.
- E— Failed; for each credit hour, 0 credit points shall be allowed. Credit for a course in which "E" has been received can be obtained only by repeating and passing the work in class.
- F— Failed absent; same conditions as E, above. This mark indicates that the student was absent from the final examination without excuse, and that his work during the Quarter does not justify the expectation that he will secure a passing grade.
- I— (Incomplete)—indicates (1) that the work of the student in the course is qualitatively satisfactory, but that for legitimate reasons a small fraction of work remains to be completed; or (2) that the record of the student in the course justifies the expectation that he will obtain a passing grade, but he has been unavoidably absent from the final examination. (Athletic eligibility is governed by Intercollegiate Conference Rules which do not permit participants in intercollegiate contests to have incomplete marks against them.) The student is charged with the responsibility of completing the work at the earliest possible time, and not later than the end of the Quarter in residence following receipt of the Incomplete; except in laboratory courses offered but once a year, he shall have one calendar year in which to complete the work. If, at the close of the Quarter, the student has not completed the work remaining to be done, he will be given a final Quarter grade for the work which shall take into consideration the unfinished part of his requirement.
- P— (Progress)—indicates satisfactory progress in courses that are individual in character or extend over more than one Quarter.
- R— Final mark will be reported at end of sequence.
- S— Satisfactory. (For graduate students only).
- T— Temporarily excused. (This applies only to Military or Air Science, Physical Education or Hygiene).
- U— Audit.
- X— Permanently excused. (This applies only to Military or Air Science, Physical Education, or Hygiene).
- Em— (Examination)—indicates credit given for work not taken in a course at this University. No credit points are allowed.
- K— Indicates work credited from other institutions, and is used by the University Examiner only. "K" credit shall be counted as hours only and shall not be considered in determining the point ratio.

REMOVAL OF FAILURE IN REQUIRED COURSE

The student is responsible for repeating in class, at his first opportunity, a required course in which he has failed, unless the Executive Committee of the College authorizes a substitute course.

NOTIFICATION OF GRADES

At the close of each Quarter the Registrar notifies each student by mail of the grades earned during the Quarter. These grades become a part of the official record of the student and are not subject to change except upon official authorization of the chairman of the department or director of the school and the Dean of the college.

A grade filed in the Office of the Registrar is a part of the official records of the University. It is not subject to change except upon written authorization of the Department Chairman or Director of the School and the Dean of the College, and then only when a clerical error has been discovered. (Rule 127)

THE POINT HOUR RATIO

A student's academic standing for a Quarter is expressed by his "point-hour ratio." This ratio is determined by dividing the total number of points earned by the total number of credit hours scheduled or undertaken. Courses graded "I or P" are not included in the computations. The following is an example: A = 4, B = 3, C = 2, D = 1, E = 0, F = 0

	Hours	Grade	Points
Course No. 1.....	5	A	20
Course No. 2.....	3	C	6
Course No. 3.....	(3)	I	
Course No. 4.....	3	E	0
Course No. 5.....	3	B	9
	<hr/> 14		<hr/> 35

Point hour ratio 2.50

When the final grade on Course No. 3 is recorded the points and hours will be included in figuring the student's point-hour ratio. When a student has a record for two or more Quarters he will have a cumulative point-hour ratio determined by dividing the total points earned by the total hours undertaken.

WARNING AND DISMISSAL

If a student's work falls below 1.5 point-hour ratio in any Quarter he shall be warned by his Dean and his parents shall be notified.

"1.5 Rule." If a student's cumulative point-hour ratio is below 1.5 at the end of the third, fourth, or fifth Quarter of residence he shall be dismissed from the University.

"1.7 Rule." If a student's cumulative point-hour ratio is below 1.7 at the end of the sixth or subsequent Quarters he shall be dismissed from the University.

"Special Action." The Executive Committee may dismiss a student if at any time his preparation, progress, or success in his assigned work is deemed unsatisfactory.

Dismissal for good and sufficient reasons may be waived by special action of the Executive Committee of the College in which the student is registered.

"Transfer Students." Students who have transferred credit from another college or university will have two Quarters at Ohio State before the above dismissal rules apply. While point-hour ratio of such a student will be computed on the work done at Ohio State, the period of enrollment at other institutions will be included when the Quarters of residence are determined.

V. STUDENT PERSONNEL SERVICES

The University and the community together provide a wide range of opportunities for learning experiences outside the classrooms. Extracurricular activities of all kinds, social affairs, student churches, student government, dormitory and fraternity life, and varsity and intramural athletic programs are potential laboratories for the development of many kinds of important living skills and appreciations.

There is an annual lecture series plus a number of concerts and plays in which students may participate. There are special advantages in the University's location in a metropolitan community in that many cultural opportunities are offered in the downtown theatre, concert, and lecture halls.

In student government agencies, Student Senate, Student Court, and elective offices and in the Colleges' Student Councils, some aspects of "training in citizenship" find expression.

Student activities which are centered in Pomerene Hall and the new Ohio Union Building along with those sponsored by the University administrative and personnel officers are ample evidence of the University's expectations that learning experience shall extend throughout the campus.

UNIVERSITY HEALTH SERVICE

The University Health Service is located in the Student Services Building. It is maintained on the campus to serve the health needs of the student body. Under the leadership of a Director, and a medical staff of attending physicians, specialists, nurses, and technicians.

The objects of the University Health Service are:

- (1) To protect, maintain, and improve the health of students; cooperation in and follow up of all communicable conditions, in cooperation with other health agencies; individual health guidance, through personal conferences; first aid and casual treatment of students on the campus; health examination for certain groups and cases; consultant specialist service for certain cases; full cooperation with family physician, other physicians and health agencies; centralized correlation of health agencies on the campus to best educational personnel ends; maintained emphasis on individual and group preventive medicine, and individual student health education in connection with other services rendered.

- (2) To serve as the primary coordinating agency through centralized health records with University Personnel officials in individual student health appraisal and health problems which involve the initiation, maintenance, or improvement of students' University relationships.

- (3) To participate in student hospitalization in the sense of cooperating in the administration of The Ohio State Student Hospital and Surgical Insurance plan or other student subsidized hospital or health insurance plans.

- (4) These benefits are open to change at any time without formal application.

- (5) Research as related to student health problems and needs.

RELIGIOUS COORDINATOR

The student body at The Ohio State University is made up of many different religious faiths. In order that the University may better meet the religious needs of the individual student, each religious group, center or foundation works through the Office of the Coordinator in all cooperative religious activities.

The Young Men's Christian Association and the Young Women's Christian Association, located on the second floor of the Student Services Building, are

also in direct contact at all times with the Coordinator. Students are encouraged to affiliate with the group representing their own faith. Information concerning all such groups may be obtained at the Office of the Coordinator of Religious Activities, Student Services Building, or telephone AX-9-3148, Ext. 601.

STUDENT FINANCIAL AIDS

Administration of student scholarships, student loans, and student employment is handled in the Student Financial Aids Office, Student Services Building. Service rendered in the office is free and available to all persons enrolled in The Ohio State University. Wives of students and those immediately dependent upon them for support may avail themselves of the employment resources. FINANCIAL AIDS COUNSELING IS A SPECIAL SERVICE OF THE OFFICE.

For further information consult the bulletin, "Financial Aids for Students." Address all communications to: The Director, Student Financial Aids Office, Student Services Building, The Ohio State University, Columbus 10, Ohio.

UNIVERSITY COUNSELING AND TESTING CENTER

The University Counseling and Testing Center is a University facility established to meet the need for professional guidance to students and to provide technical service to college offices who also counsel students. It works in close cooperation with the college in advising students in relation to their long-term educational and vocational plans. This service is available free to all students in the University at any time vocational counseling is appropriate. Tests are also administered as requested by the college offices as part of their counseling program. A continuous research program is maintained for the improvement of counseling techniques and occupational information.

Students are encouraged to use the occupational library in the University Counseling and Testing Center which contains a large collection of books and pamphlets dealing with a wide range of occupations. Suggestions are also made as to seeking information from many other sources such as college Deans, Junior Deans, college Faculty or other persons who may provide additional vocational orientation to assist the individual in making the best adjustment to life.

All students are welcome to the facilities of the University Counseling and Testing Center, located in the Student Services Building. Counseling may be requested by any student directly or a referral may be made by a college office or by any University faculty member.

LIBRARY FACILITIES

The University Libraries consist of all books owned by the University, and include over 1,150,000 volumes. The Main Library contains the major part of the book collections in the general field of the Humanistic studies. Other important divisions of the book collection, primarily in the field of the sciences, are housed in Departmental Libraries in the other University buildings. A catalog of the entire collection is maintained in the Main Library.

Any person may use the University collections for reference use within the Library rooms. Only faculty, staff, and registered students of the University may withdraw books for home use.

VI. HONORS, SCHOLARSHIPS, AND AWARDS

University scholarships are classified as restricted or unrestricted and, whether set up by donors with special provisions for their awards or under the jurisdiction of the University Scholarship Committee for awards, are of two types—merit (general) scholarships or grants-in-aid. Open to enrolled or entering students, primarily residents of Ohio, the scholarships approximate \$150 a year. High academic record, need, field of study, and promise are chief selection factors. Requirements are for enrolled and transfer students to hold a 3.0 cumulative point-hour ratio, or its equivalent, and for entering students to rank in at least the upper third of their high school graduating class. Applications may be had in Student Financial Aids Office, Student Services Building and should be filed, if possible, in the early Spring for the subsequent year, beginning Autumn Quarter.

For further information consult the bulletin, "Financial Aids for Students." Address all communications to: The Director, Student Financial Aids Office, Student Services Building, The Ohio State University, Columbus 10, Ohio.

The honors, scholarships, and awards as listed below are available to students enrolled in the College of Education.

THE RHODES SCHOLARSHIPS

Men who have completed their sophomore year at The Ohio State University are eligible to compete for the Cecil Rhodes Scholarships, tenable for two or three years at Oxford University, England, with a stipend of six hundred pounds each year. These scholarships are awarded on the combined basis of character, scholarship, athletics, and leadership in extra-curricular activities. Further information may be obtained from Royall H. Snow, Department of English, Room 114, Derby Hall; or from the Dean of the College of Arts and Sciences.

THE WILLIAM EDWARD BINGHAM MEMORIAL MEDAL IN PHILOSOPHY

A medal is awarded annually to the undergraduate who presents the best essay on a philosophical topic. The conditions of the competition are fixed by the Department of Philosophy. The medal, established in 1922, is a memorial to William Edward Bingham, a graduate student in philosophy in this institution from 1914 to 1916.

THE BRYAN PRIZE

Through the generosity of the late Hon. William J. Bryan an annual prize of \$100 is offered for the best essay on a subject involving the principles underlying the American government. Competition for this prize is open to all graduate students who are alumni of this University, and to all members of the graduating class. For further information make inquiry of the Chairman of the Department of History.

THE VANDEWATER POETRY PRIZE

The Vandewater Poetry Prize was established by Mrs. Sarah O'Kane Raymond, '91, in honor of her grandfather. All students, graduate or undergraduate, *in residence* in the University are eligible to compete. No limit is set to the number of contributions that may be offered by one contestant. Announcement of the \$25 award is made in May.

THE JOHN GORDON BATTELLE MILITARY PRIZE

The income of the John Gordon Battelle Fund, established in 1916, is to be used as a yearly prize for senior cadet officers in the ROTC for the best essay on a military tactical principle. Members of the Medical Corps are not eligible. The income is now sufficient to offer a substantial prize for the three best solutions.

THE SWORD OF '86

The Class of 1886 presented the Military Department with a prize sword to be presented to the outstanding First Year Advanced Course student in the ROTC Regiment, except Medical Department students. He has the privilege of wearing it for one year. At the close of the year, he is presented with a prize, and the Sword of 1886 is returned to the Military Department.

Since the sword is now an obsolete item of military equipment it is displayed in the Military Science Department and the prize is awarded to the Cadet Colonel at the annual President's Review. The Cadet Colonel is chosen for overall military and scholastic excellence.

THE AIR FORCE ASSOCIATION MEDAL

The Air Force Association Medal is awarded to the outstanding Advanced Course Air Force ROTC cadet. This association is an independent, non-profit air power organization founded in 1946 with Lt. Gen. James Doolittle as its first president. The cadet who receives the award is designated by the Professor of Air Science and Tactics.

AIR FORCE RESERVE OFFICERS OF COLUMBUS AWARD

A scroll is presented to the Air Force ROTC Basic student who through extra-curricular activities has contributed most to the Air Force ROTC program at The Ohio State University. The cadet who receives this award is designated by the Professor of Air Science and Tactics.

RESERVE OFFICERS' ASSOCIATION AWARD

Each year the Professor of Air Science and Tactics chooses one Senior, Junior, Sophomore, and Freshman Air Force ROTC student to receive the Reserve Officers' Association medal. The students are chosen for their high ability and scholastic accomplishments.

PHI LAMBDA UPSILON AWARD

Eta Chapter of Phi Lambda Upsilon presents annually an award to the outstanding Senior majoring in chemistry, and related fields such as chemical engineering, physiological chemistry or agricultural biochemistry. The award consists of the addition of the recipient's name to the Phi Lambda Upsilon Plaque, which hangs in the Main Hall of the McPherson Chemical Laboratory and of not more than fifteen dollars worth of books chosen by the recipient.

VII. THE COLLEGE OF EDUCATION

In accordance with an act of the Ohio General Assembly, The College of Education was established in 1907 to provide for the professional education of teachers and other educational workers.

The College of Education engages in four major types of service:

1. The professional preparation of teachers and other educational workers;
2. The preparation of research and other non-teaching workers in educational activities;
3. The rendering to other colleges of the University those services which are appropriate to the functions and resources of the College of Education;
4. The rendering to the schools, colleges, social agencies, and people of the state and nation those services which are appropriate to the special competencies of members of the College staff.

The College prepares teachers for elementary and secondary schools, for junior colleges, and teachers colleges; it likewise prepares administrative officers for all these institutions. It prepares guidance workers; school psychologists; clinical workers; speech-hearing therapists; occupational therapists; curriculum specialists; specialists in educational fact finding and evaluation; professional artists and musicians; and workers in numerous other educational endeavors. These varied undertakings are interdependently associated with each other in content and procedures.

The College assumes among its major responsibilities that of guiding its students in the selection of experiences conducive to the attainment of their educational purposes. These experiences manifestly include not only the work done in the College itself but also the courses pursued in other colleges of the University as well as various educative activities within and beyond the confines of the campus.

The College holds the view that professional education involves more than the achievement by its students of adequate knowledge and skill for the performance of their occupational duties. It conceives of professional education as including the promotion of such other developments as acceptable social and personal attitudes, ethical standards, ideals of service, and the acceptance of professional and social responsibility. Consequently its programs seek to fulfill the needs of individuals for these and similar competencies. In harmony with the foregoing concepts, the College manifestly must exercise its responsibility to the state by dismissing or not accepting students who demonstrate lack of competence in these needful qualifications for professional growth and service.

DEPARTMENTS

The College of Education includes eight major divisions, as follows:

- (1) The Department of Education (which includes the areas of Elementary Education, Guidance, Philosophy and History of Education, School Library Science, Secondary Education, Special and Adult Education, Vocational and Practical Arts Education, Workshops and Field Experience; on the graduate level, Educational Administration, Higher Education and Teacher Training, and Research).
- (2) The School of Fine and Applied Arts.
- (3) The School of Music.
- (4) The Department of Psychology.
- (5) The Department of Occupational Therapy.
- (6) The University School.
- (7) The Bureau of Educational Research.
- ,(8) The Bureau of Special and Adult Education.

The first four divisions, named above, offer both undergraduate and graduate instruction.

The various curricula of the College of Education include courses offered by about forty other departments of the University, each of which thus contributes to the education of teachers and of professional workers in the arts, in psychology, and in occupational therapy. These departments whose resources are available to College of Education students include the following: Accounting, Agricultural Biochemistry, Agricultural Economics and Rural Sociology, Air Science, Anatomy, Architecture and Landscape Architecture, Bacteriology, Botany and Plant Pathology, Business Organization, Ceramic Engineering, Chemical Engineering, Chemistry, Civil Engineering, Classical Languages and Literature, Conservation, Economics, Engineering Drawing, English, Flight Training, General Studies, Geography, Geology, German, History, Home Economics, Industrial Engineering, International Studies, Journalism, Mathematics, Military Science, Naval Science, Nursing, Pharmacy, Philosophy, Photography, Physical Education, Physics and Astronomy, Physiology, Political Science, Psychiatry, Radio, Romance Languages and Literatures, Russian, Social Administration, Sociology and Anthropology, Speech, Welding Engineering, and Zoology and Entomology.

THE UNIVERSITY SCHOOL

The University School is a laboratory in which students in the College of Education may observe and study modern elementary and secondary school practice, with special emphasis on curriculum planning and action research. The advantages of a close integration of theory and practice are thus secured. Systematic observation is specified as a partial requirement in certain courses as described in this Bulletin. With the permission of the director of the school and by appointment, advanced students in the College of Education or the Graduate School may participate in the study of problems under investigation at the school. The University School consists of work from the kindergarten through the twelfth year. The University School is housed in a three-story building on the campus at the corner of Woodruff Avenue and High Street. It is fully equipped to carry on the most modern educational practices.

THE BUREAU OF EDUCATIONAL RESEARCH

The Bureau of Educational Research was created in the College of Education in recognition of the need for research in the field of education, and in order to serve the public schools of the State whose research problems are especially numerous. Under certain conditions, students may study with staff members of the Bureau for credit in the Department of the College. Graduate students will find the facilities of the Bureau of great assistance. In addition to its research and field-service functions the Bureau maintains the following service agencies available to students: The Division of Appointments (for the placement of teachers and other educational workers), Reference Library, an Educational and Psychological Test File, and the Teaching Aids Laboratory of which the Curriculum Materials Center is a part, for the use of the College and the University.

THE BUREAU OF SPECIAL AND ADULT EDUCATION

The Bureau of Special and Adult Education is organized to promote the education of all types of exceptional children and to further the work of adult education. See Departments of Instruction for further description of the Bureau.

SUMMER QUARTER

Courses offered by the professional departments of the College of Education during the Summer Quarter include most of the courses offered during the

year, thus making it possible for teachers in service to complete work for an advanced for the bachelor's degree by attending successive Summer Quarters, and for other students not in both the teaching and non-teaching areas to accelerate their programs if they so desire. Practically the entire staff of the professional departments offers instruction during the Summer Quarter.

The Summer Quarter is divided into two terms of equal length. A student may register for either term or for the entire Quarter.

Students desiring information regarding the Summer Quarter should write for the Summer Quarter Bulletin.

LIBRARY FACILITIES

The Education Library, on the second floor of Arps Hall, contains a selected collection of works on educational topics, and includes the sets of the most important American and foreign educational and psychological journals, city and state school reports, texts and reference works in the fields of education and psychology.

The Reference Library of the Bureau of Educational Research, also on the second floor of Arps Hall, is available to University students. It contains a collection of over 8,000 professional books as well as publications of various agencies concerned with education, which are catalogued according to an intensive subject heading index. In addition there is maintained an Educational and Psychological Test File.

ADMISSION TO COURSES LEADING TO A DEGREE IN THE COLLEGE OF EDUCATION

For complete entrance credit, as explained in Chapter II, an applicant for admission to the University must be a graduate of a high school of the first grade or obtain credit by examinations covering fifteen entrance units.

The College of Education is willing to accept any pattern of units which includes those required by the State Department of Education for graduation from high school. The *Ohio High School Standards* specify a total of sixteen units. They *must include* three unit of English, one unit of science, one unit of mathematics, and two units of social studies, including one unit of American history and government. In addition to the major of three units in English, each graduate must have completed one other major of three units and two minors of two units each. The College is particularly desirous, however, that entering students have these skills: ability to read rapidly and with comprehension; command of the fundamentals of effective speech and writing; ability to use arithmetical concepts; effective habits of study.

For certain curricula it is desirable that students have high school preparation as indicated below:

Home economics and physical education—sciences with emphasis on chemistry and biology.

Business education—typing and shorthand.

Fine arts—freehand drawing or design.

Industrial arts—shop and mechanical drawing.

Music—ability to pass entrance examination; for details, see page 77.

Dental hygiene education—algebra and plane geometry.

Academic teaching fields—all the high school courses closely related to the teaching fields chosen.

Occupational therapy—biology, chemistry, freehand drawing or design. For special procedures and requirements for admission to the curriculum in occupational therapy, see page 104.

DEGREES CONFERRED

The teacher-education curricula of the College are all four years in length and lead to the degree Bachelor of Science in Education. The College confers also the degrees Bachelor of Fine Arts, Bachelor of Music, and Bachelor of Science in Occupational Therapy. A list and page index of all curricula and fields of specialization is given in Section IX, pages 34 and 36 of this Bulletin.

DEGREE CUM LAUDE

The College of Education grants the Bachelor's Degree *cum laude* or *summa cum laude* to a limited number of selected students. The College Committee on Degrees with Distinction will recommend to the Faculty, for graduation *cum laude* or *summa cum laude* those persons who have met the criteria of *superior undergraduate attainment and outstanding professional promise* which have been established by the College. These criteria include: (a) Evidence of high professional promise as shown by the student's total record and especially by superior accomplishment in student teaching, performance in fine arts or music, or in internship in occupational therapy; (b) scholarship as indicated by a minimum cumulative point-hour average of 3.50 for the four years, with the provision that other students with a four-year cumulative point-hour average of 3.25 or higher who are especially recommended as outstanding will be considered (minimum for *summa cum laude*, 3.70); (c) ability to write and speak clearly and effectively; (d) excellence in other factors of competency; (e) leadership experience and ability; (f) recommendation by the adviser or the faculty in the area of specialization.

Further information may be obtained by conferring with the Chairman of the Committee on Degrees with Distinction.

COLLEGE ADVISORY AND COUNSELING PROGRAM

The College of Education has built its program on the philosophy of working closely with the individual student. This is necessary in a college in which the main purpose of the professional program is to prepare young men and women to teach in the public schools of Ohio. A major responsibility in this connection is to help students achieve maximum personal and professional growth. Faculty advisers and student personnel specialists are concerned with challenging the superior student as well as helping all students with any personal, academic, or social problems which confront them. The College of Education has implemented its philosophy of individual guidance with a carefully organized program of student personnel services which supplement the University program. These College services to students are discussed briefly in the sections which follow:

Student Counseling: The Coordinator of Student Personnel and the members of his staff and the Secretary of the College are interested in helping students with concerns in the areas of schedule planning, vocational choice, scholastic standing, and personal adjustment. This group of counselors also acts as consultants with parents and faculty advisers on individual student problems.

Faculty Advisers: There are faculty advisers available to serve all students. Students enrolled in departments of Music, Fine Arts, Physical Educational and Occupational Therapy will be assigned to advisers in these areas. Students in general secondary programs such as English, social studies, and sciences will be advised by faculty in these areas as soon as the major area is declared (usually in the third or fourth Quarter).

The Coordinator of Student Personnel and his staff and the Secretary of the College are available to advise on schedule planning for both elementary and secondary education.

A small group of faculty advisers serve as Coordinating Advisers to coordinate and make more effective all the areas of advising in the entire College of Education.

REMEDIAL AIDS CENTER

The Psychology Department and the Bureau of Special and Adult Education offer consultation service to students with problems which are affecting their success in college. The appointments desk, which is located on the third floor of Arps Hall, is open from 9-12 and 1-4 daily except Saturday. The following types of service are provided:

Counseling on Study Habits and Methods: Individual diagnosis and remediation of students' habits and methods of studying are provided. Students' attention is also called to the course Psychology 411, "The Psychology of Effective Student Adjustment."

Social and Personal Counseling. A considerable number of students find themselves confronted with emotional, social, or personal difficulties which cause distress and distract attention from college work. Until such problems are solved, they may persist as handicaps to success both in college and in teaching. Individual confidential consultations are available to such students by appointment. Contact the appointments desk on the third floor of Arps Hall.

Speech and Hearing Service: Students preparing to teach must meet standards in speech and must be free from any serious handicap. College of Education students can check on their adequacy in speech and hearing by consulting the speech adviser in the College of Education in Room 321, Arps Hall.

REINSTATEMENT OF DISMISSED STUDENTS

Students who have been dismissed for failure to meet scholarship standards have the privilege of petitioning the College for reinstatement after an interval of one Quarter, but should not expect approval of their petitions unless their cases have unusual merit. Any student petitioning for reinstatement in the College of Education must: (1) Personally interview at least one member of the Petitions Committee; (2) Present a written petition, using the standard form, not later than 10 days before the beginning of classes in the Quarter in which reinstatement is requested; (3) Supply any additional data, take any examinations, confer with other counselors, or carry out other instructions, as may be directed by the Petitions Committee. Any student who is reinstated will be subject to the following minimum standard which has been established by the College of Education Faculty: "Any student who has been readmitted must earn a point-hour ratio of not less than 2.0 on the work of each Quarter until he has attained a cumulative point-hour ratio of 1.8. If the student fails in any Quarter to meet this standard, he shall be dismissed." Readmission may be granted subject to any other conditions which the Petitions Committee considers important in assisting the student to regain good standing in College.

TEACHER PLACEMENT SERVICE

The Ohio State University maintains a Teacher Placement Service for the convenience of the colleges, superintendents and boards of education of the State. Graduates and graduate students of the University are invited to enroll with the Division of Appointments. Registration with the Division of Appointments is a prerequisite for graduation from the College of Education.

The Placement Service is under the direction of the Bureau of Educational Research. This service is rendered free of charge to the applicants. Graduates of experience who desire to better their locations are invited to communicate with the Division of Appointments.

The Division of Appointments has statistical information available so that advice and direction may be given in the matter of supply and demand for teachers in various fields.

Superintendents and boards of education are invited to state their needs to the Division of Appointments. Prompt attention to all calls is assured.

EDUCATION STUDENT COUNCIL

The College of Education Student Council is composed of representatives of the student body selected by the students on the basis of leadership and successful scholarship. The Council endeavors to serve as a coordinating body among the students, faculty, and administration of the College. Members of the Council meet during the year with the important working committees of the College Faculty. Each year, several projects, planned to foster a better understanding of the aims and purposes of the College, are carried out. Members of the Council also serve on six of the major faculty committees in the College. Anyone interested in membership on the Council should contact one of the members or the Coordinator of Student Personnel.

PROFESSIONAL FRATERNITIES AND SORORITIES

Chapters of several professional fraternities and sororities for men and women majoring in the fields of education have been organized at this University. The purpose of these organizations and their criteria for membership are described in the paragraphs which follow. For further information, the interested student is advised to confer with the faculty adviser or an officer of the organization.

Phi Delta Kappa, national professional educational fraternity, was founded in 1906. Members are selected from men of high scholastic and professional standards who are majoring in the field of education, membership being confined mostly to graduate students, but including a limited number of seniors selected because of their high qualifications. Sigma Chapter at The Ohio State University was established December 1, 1917.

Pi Lambda Theta, national honorary educational fraternity, is open to women students of junior, senior, and graduate standing. Selections of members is based upon scholastic attainment, professional and social accomplishment. The fraternity was founded in 1917; Nu Chapter at The Ohio State University was established in 1921.

Kappa Phi Kappa, national professional educational fraternity for undergraduates and graduate students in Education, established Alpha Eta Chapter at The Ohio State University in 1928. The purpose of this fraternity is to emphasize professional ideals, scholarly attainment, and social intercourse. Members are selected from men who have given promise of genuine interest in the professional study of Education. The fraternity, which was inactive during the war, was reactivated in May, 1946. Address: 1905 Indianola Avenue.

Pi Omega Pi, national business education honorary fraternity, was founded in 1923 and Alpha Xi Chapter at The Ohio State University was established in 1939. Selection of membership is from students, both men and women, of junior, senior, and graduate standing. Its purpose is to encourage, promote, extend and create interest and scholarship in business education.

Epsilon Pi Tau, international honorary professional fraternity in Industrial Arts and Industrial-Vocational Education for upperclassmen and graduate students, was founded at The Ohio State University in 1929. There are fifty-seven chapters with over nine thousand members residing in forty-eight states and in several foreign countries. Its ideals are to advance beyond an assumed basis of *artisan skill* into *social proficiency*, active *research* effort and

professional leadership. Basis for membership lies in the individual's scholarship and leadership record.

Delta Omicron, national professional sorority, is represented by Chi Chapter, established at The Ohio State University on December 13, 1928. The purpose of this sorority is to create and foster fellowship among musicians during their student days, with the idea of attaining the highest degree of musicianship individually. Selection of members is based upon scholastic standing, musicianship and performance, and social qualities.

Phi Mu Alpha Sinfonia, national honorary music fraternity, founded in 1898, is represented by Beta Xi Chapter, one of seventy-two active chapters. Its purpose is to advance in America the composition and performance of the best in music, to foster the mutual welfare and brotherhood of students of music, to foster certain ideals in both individual development and group accomplishment, and to encourage loyalty to the Alma Mater. Selection of members is on the basis of scholarship, musicianship, and social qualities.

Kappa Kappa Psi, national band fraternity, is represented by Eta Chapter. Men students who have participated in University Band for one full year are eligible for membership. Members are chosen on the basis of merit in musicianship, attitude, and service. The purpose of the organization is to promote a greater interest in the field of band music; to honor outstanding bandmen; to foster a closer relationship between all University bands; and to encourage a cooperative spirit of all musical organizations in the University.

Tau Beta Sigma, national band sorority, is represented by Chi Chapter. Women students who have participated in a University band for one full year are eligible. The purpose of the organization is to promote interest in college band participation by women and to aid in the administration and promotion of the band program of the University.

Student Occupational Therapy Association, local occupational therapy organization, was established at The Ohio State University in 1942. Any student actively pursuing the curriculum in Occupational Therapy is eligible for membership. The purpose of the organization is to foster a spirit of professional unity among its members, to promote interest in and to further knowledge of occupational therapy.

Alpha Psi Delta, national psychological fraternity, is represented at The Ohio State University by Beta Chapter, established at The Ohio State University in 1921. Its members are faculty members of the Department of Psychology, and graduate students who are specializing in psychology. The meetings are largely devoted to lectures on and round table discussions of psychological topics, and to the reviews of books and periodicals in the field.

GRADUATE WORK IN DEPARTMENTS OF COLLEGE OF EDUCATION

Students desiring to do graduate work in departments of the College of Education will register in the Graduate School. Graduate courses leading to the degrees of Master of Arts, Master of Education, and Doctor of Philosophy are offered by the Department of Education. Graduate courses leading to the degrees of Master of Arts and Doctor of Philosophy are offered by the Departments of (1) Psychology; (2) Physical Education, and (3) the School of Fine and Applied Arts. Graduate work leading to the degree of Master of Arts is offered also by the School of Music. For information regarding fees, registration, graduate degree, etc., consult the Bulletin of the Graduate School.

All graduate students registered in courses numbered from 600 to 799 are required to complete a certain amount of work in addition to that required of undergraduates. This may consist of reading additional books on the subject, the presentation of reports, or of such other work as the instructor in charge of this course may require.

VIII. IMPORTANT STEPS IN PLANNING AND PROCEDURE FOR STUDENTS

There are certain important steps in planning and in procedure that must be taken at stated times, beginning with the first Quarter of enrollment in the College of Education and ending with graduation. It is the *student's responsibility* to see that these requirements are met when due. Some of these procedures concern only the students in teacher-education curricula; the others concern all students in the College. For the student's convenience these are listed below in the order of occurrence, in a *Check List of Procedures*. Each of these steps is fully explained on the immediately following pages 29 to 33.

Every student is urged to refer to this section of the Bulletin frequently in checking his progress and in anticipating future responsibilities. Failure to attend to any one of these procedures when due may make it necessary for the College Office to delay or withhold approval of the student's schedule.

CHECK LIST OF PROCEDURES

1. SCHEDULE EDUCATION 408—earliest possible Quarter in Education; all students except those in Fine Arts and Bachelor of Music curricula. (See page 29.)
2. PREPARE AND FILE SCHEDULE—each Quarter as directed; all students. (See page 29.)
3. PLAN FOR MEETING FIELD EXPERIENCE REQUIREMENT—teacher-education students only. (See page 29.)
4. SECURE WRITTEN APPROVAL OF ADMISSION TO MAJOR FIELD—beginning of the sophomore year in certain field. (See page 29.)
5. DECLARE CHOICE OF CURRICULUM OR MAJOR TEACHING FIELDS—in approximately the first Quarter of sophomore year; all students. (See page 29.)
6. MEET CRITERIA FOR PROVISIONAL ACCEPTANCE FOR TEACHING—before admission to student teaching; teacher-education students only. (See page 30.)
7. MEET CRITERIA FOR ADMISSION TO JUNIOR STANDING IN NON-TEACHING CURRICULA—last Quarter of junior year; non-teacher-education students only. (See page 30.)
8. PLAN TENTATIVE PROGRAM FOR JUNIOR AND SENIOR YEARS—at the beginning of junior year; all students. (See page 31.)
9. COMPARE YOUR POINT-HOUR AVERAGES WITH STANDARDS FOR PROVISIONAL ACCEPTANCE FOR TEACHING, STUDENT TEACHING, AND GRADUATION—all four years; all students. (See page 31.)
10. FILE APPLICATION FOR STUDENT TEACHING—during the third Quarter of junior year; teacher-education students only. (See page 31.)
11. REGISTER CANDIDACY FOR DEGREE—three quarters prior to expected time of graduation; all students. (See page 32.)
12. FILE STUDENT TEACHING PLACEMENT CARDS—AND TWO COPIES OF PERSONAL DATA RECORD—before registering for student teaching; teacher-education students only. (See page 32.)
13. REGISTER WITH DIVISION OF APPOINTMENTS—before filing schedule for final Quarter; teacher-education and occupational therapy students only. (See page 32.)
14. FILE APPLICATION FOR OHIO TEACHER'S CERTIFICATE—during fourth week of final Quarter; teacher-education students only. (See page 32.)
15. OBSERVE GENERAL UNIVERSITY REQUIREMENTS RELATING TO GRADUATION—All students. (See pages 32 and 33.)

THE CHECK LIST PROCEDURES

1. EDUCATION 408

Students (except those in Fine Arts and Bachelor of Music Curricula) scheduled Education 408 for the earliest possible Quarter.

2. PREPARING AND FILING QUARTER'S SCHEDULE

The student in the College of Education is responsible for planning his Quarterly schedule. Every student should use the College Bulletin in this planning and if further assistance is desired he should consult with an adviser in the Student Personnel Office or College Office. When the student declares his major field an adviser in that area will be available for help in working out his schedule and program. Each student is responsible for planning his own schedule and meeting all requirements. The adviser assists the student in the process.

3. FIELD EXPERIENCE PREREQUISITE FOR STUDENT TEACHING

As a part of the total counseling program of the College, every teacher-education student is required to complete a Field Experience Record, usually during his first year in the College, and a faculty member will work out and approve for each student an individual plan for meeting the Field Experience prerequisite to Student Teaching. Any teacher-education student, who is not required to take Education 408, shall develop such a plan in conference with his major area adviser.

The student shall assume full responsibility for completing his plan one full Quarter prior to his enrollment in student teaching. The staff in the Student Field Experience Office is available at all times to assist students through counseling and to help the students to arrange desirable experiences in schools and community agencies. The student's major adviser will aid the student in evaluating his progress and in setting up desirable modifications in the plan.

4. APPROVAL OF ADMISSION TO MAJOR

In many of the curricula and major fields of specialization, the College *requires* that the student confer with an authorized adviser, and secure the adviser's signature of approval, as a condition for *admission* to this curriculum or major. The adviser's approval is thus required in English, Mathematics, Psychology and Guidance, Radio-Speech, Speech; in most of the "special" curricula listed on page 35 of this Bulletin; and in Occupational Therapy. In other fields, the student is encouraged to contact the adviser as early as he can in order that, together, they may consider the wisdom of the student's proposed choice in terms of his interests and abilities.

5. DECLARATION OF CURRICULUM OR MAJOR TEACHING FIELDS

Not later than the first Quarter of the sophomore year or when he has accumulated 60 Quarter credit hours, each student in the College should file in the Office of Student Personnel a statement declaring his choice of fields of specialization. Whenever possible, this statement should be filed *earlier*—as soon as a definite choice has been made. Early declaration enables the College Offices and other advisers to extend more satisfactory guidance to students. If the student, later, in conference with his adviser, decides to change his field (s) of specialization, he should declare this change in the Office of Student Personnel.

In all cases of students in teacher-education curricula, the choice of major and minor teaching fields shall be officially approved by the Secretary of the College of Education and by the area adviser when so specified.

6. PROVISIONAL ACCEPTANCE FOR TEACHING PROGRAM

The Provisional Acceptance for Teaching Program involves five factors or competencies in terms of which the student can evaluate himself as a potential teacher. The administration of this Program is supervised by the College Committee for the Student Personnel Program.

Not later than the first Quarter of the Sophomore year, or when he has accumulated 60 Quarter credit hours, each student in the College will file in the Student Personnel Office (Room 106, Arps Hall) a statement declaring his choice of fields of specialization. Attached to this Declaration of Field of Specialization card will be two Provisional Acceptance for Teaching cards (one for the students and one for file in the Student Personnel Office).

At the time he turns in these cards, each student will be given one of the Provisional Acceptance for Teaching cards which will indicate the requirements he has to meet. Each student in a *teacher-education curriculum must complete* these requirements *before* he will be allowed to register for student teaching (Education 518, Education 536, Education 537, Education 505 in the 6-year Study-Service Curriculum). Students in other curricula will be given instructions at the time they are given the Provisional Acceptance for Teaching card.

The factors considered in this Program are: (1) English skills; (2) Professional rating; (3) Minimum cumulative point-hour ratio of 2.00; (4) Speech and Hearing rating; (5) Health rating.

English Skills—The standard for English skills can be met by obtaining an average of 2.0 or better in the freshman English courses taken at the Ohio State University (English 416, 417, 418). Students who fail to meet this standard must repeat the course or courses in which a grade of "D" or "E" was received to make the required grade-point average. Transfer students from other institutions who have received "K" credit for all three freshman English courses will be considered to have met the required standard.

Professional rating—This will be secured by the use of a Professional Rating Form from the student's assigned adviser or from an instructor in one of the professional courses. An evaluation of at least "Fair" is necessary.

Speech and Hearing rating—Adequacy of speech and hearing will be checked routinely; any student required to take special tests or courses will be notified.

Health rating—Health status will be checked routinely; any student required to have a special health check will be notified.

It is important to remember that no student will be permitted to register for student teaching until he has completed these requirements. After he has declared his major field and been given a Provisional Acceptance for Teaching card, a student may go to the Office of Student Personnel (Room 106, Arps Hall) at any time to check his status with regard to these requirements. Every student in a regular four-year degree program will be expected to make such a check at the time he completes 125 Quarter credit hours; students enrolled in any of the teacher-education programs other than the regular four-year degree program should make this check at least 2 Quarters before they expect to do student teaching.

7. JUNIOR STANDING IN NON-TEACHING CURRICULA

Students in the College of Education working toward the degree, Bachelor of Fine Arts, attain junior standing when they (1) have accumulated at least 98 Quarter hours of credit, (2) have attained a cumulative point-hour ratio of

at least 2.00 for all work undertaken at the University, and (3) have been approved for junior standing by a committee of the faculty of the School of Fine and Applied Arts. However, delay in attaining junior standing because of low point-hour ratio will increase the student's requirements for graduation to more than the regular minimum of 200 Quarter hours in the School of Fine and Applied Arts.

Students in the College of Education working toward the degree, Bachelor of Music, or the degree, Bachelor of Science in Occupational Therapy, attain junior standing when they (1) have accumulated at least 98 Quarter hours of credit and (2) have attained a cumulative point-hour ratio of at least 2.0 on all work undertaken at this University.

8. PROGRAM FOR JUNIOR AND SENIOR YEARS

Every student is strongly advised to prepare, not later than the beginning of his junior year, a tentative program indicating Quarter by Quarter the courses he will probably wish to elect to complete his curriculum. Such systematic, long-time planning, rather than planning for one Quarter at a time, will help to eliminate unforeseen difficulties in time scheduling, will aid in securing satisfactory sequences in the required courses, in making wise choice of electives, and in electing well-balanced quarterly programs.

When planning a long-time program, the student should study his curriculum requirements and the programs of his teaching fields, examine the elective courses offered and consult his adviser before definitely arranging his program. A suggested list of free elective is found on page 45.

Care should be used in the selection of minor teaching fields. Advisers should be consulted as to appropriate combinations with major fields.

9. MINIMUM POINT HOUR-RATIOS

From the first Quarter of the freshman year to the Quarter of graduation it is important that every student should know accurately how his scholastic standing compares with the minimum point-hour ratios which are required at stated points in his progress. The most important of these *minimum standards* are here summarized and are as follows:

- (a) for *Provisional Acceptance for Teaching*, a point-hour ratio of 2.0 on his entire record at this University. (See Section 6 above.)
- (b) for *admission to student teaching*, a minimum point-hour ratio of 2.25 in the group of required professional courses, and a minimum point-hour ratio of 2.25 in his major teaching field (secondary or special) or in each of his two majors if he is taking two majors in the general secondary curriculum.
- (c) for *graduation*, a minimum point-hour ratio of 1.8 on his entire record at this University and a minimum point-hour ratio of 2.25 on all courses taken at this University in each of his completed required major and minor fields of specialization.

It should be emphasized that these point-hour ratios are *minimum standards* and do not represent the quality of attainment for which the student should strive.

10. PRELIMINARY APPLICATION FOR STUDENT TEACHING

Every student must file in Room 103, Arps Hall, a preliminary application for student teaching not later than three Quarters prior to the Quarter in which he expects to be enrolled in student teaching (Education 518, 520, 536 or 537.) (Transfer students above sophomore level should file an application upon entrance to the college.) These applications enable the Coordinator of Student Field Experience to determine the applicant's eligibility for student teaching in a subsequent Quarter, and also serve as a basis for estimating

student-teaching enrollments. Before being admitted to student teaching the student must meet the following conditions: (1) admission to Provisional Acceptance for Teaching; (2) completion of the field experience prerequisite, (3) completion of a minimum of two Quarters of full-time residence work in the College of Education; and (4) completion of the specific curricular and scholastic prerequisites for the particular student teaching course concerned. Application blanks and bulletins giving further information concerning student teaching are to be obtained in Room 103, Arps Hall.

11. REGISTRATION AS A CANDIDATE FOR DEGREE

Every student is required to register candidacy for his degree in the College of Education three Quarters prior to the expected time of graduation. The Registration of Candidacy for Degree card for this purpose can be obtained at the College Office, 102 Arps Hall. Failure to comply with these instructions will make it necessary to withhold approval of students' schedules.

If the proposed date of graduation is changed, the student should confer with the Senior Counselor in the College Office immediately and a new Registration for Degree card must be filed at once.

12. STUDENT-TEACHING PLACEMENT CARDS AND THE PERSONAL DATA RECORD

Student-teaching placement cards and two copies of a personal data record must be filed in Room 103, Arps Hall, not later than the time of filing the schedule for the Quarter in which student teaching is to be taken. The College Office will refuse to approve any schedule which includes a course in student teaching (Education 518, 520, 536 or 537) until the placement cards and personal data record have been filed. Further details regarding registration for student teaching will be found in the course descriptions of Education 518, 520, and 536. Placement cards and the form for the personal data record are to be obtained in Room 103, Arps Hall.

13. REGISTRATION WITH DIVISION OF APPOINTMENTS

All seniors who are prospective candidates for the degree of Bachelor of Science in Education, and for the degree of Bachelor of Science in Occupational Therapy, should have completed registration with the Division of Appointments, Room 111, Arps Hall, not later than the fourth week of the first Quarter of the Senior year. Forms for the registration are to be obtained from the Division of Appointments. This is a requirement for graduation, and the schedule of the last Quarter of the Senior year will not be approved by the Secretary of the College of Education until the student has completed registration with the Division of Appointments.

14. APPLICATION FOR OHIO TEACHERS' CERTIFICATE

All Bachelor of Science in Education graduates are eligible *upon application* for the appropriate four-year provisional teacher's certificate. Official application forms with instructions will be mailed to all prospective graduates at the beginning of the Quarter of graduation. If the student contemplates teaching within a year after graduation, the application should be completed and returned to the College Office, 102 Arps Hall, not later than the fourth week of the Quarter. The certificates will then be delivered with the graduating diploma.

15. GRADUATION

Announcement of Candidates for the Degree—For the information of candidates for graduation each Quarter, the College office, near the beginning of the Quarter, will post a *tentative* list of candidates for all degrees on the official bulletin board at the main entrance to Arps Hall.

Residence Requirement for a Degree—A candidate for a degree must secure credit by regular class enrollment for the full work of three Quarters, i. e. at least 45 Quarter credit hours. This work must be in courses offered by the College recommending the degree, and must be secured while in residence at this University.

Ordinarily the student must be enrolled in the college recommending the degree while completing the last two Quarters required of him, but the Executive Committee of that college may, for sufficient reason, waive compliance with this requirement to the extent of not more than one Quarter's work in favor of a student who has done six full Quarters of satisfactory residence work at this University, including forty-five Quarter-credit hours completed during the junior and senior years. (Rule 181.)

Point-hour Ratio Required for Graduation—In all curricula, to be eligible for graduation, the student is required to have a cumulative point-hour ratio of not less than 1.8 on all work taken at this University. (Rule 183.)

To be eligible for the degree of Bachelor of Science in Education, the student must have an average point-hour ratio of not less than 2.25 on all courses taken at this University in each of his completed, required major and minor fields. (See also page 41.)

To be eligible for the degree Bachelor of Fine Arts, the student must have an average point-hour ratio of not less than 2.25 on all courses taken at this University in his field of specialization.

Graduation Fee—No graduation fee is charged for persons receiving a bachelor's degree.

Instructions for Graduates—Printed senior instructions with detailed information concerning rehearsal and Commencement will be mailed to all graduating seniors approximately two weeks before Commencement. Attendance at rehearsal is required unless excused by the Senior Counselor.

Commencement-Convocation—A special Convocation or Commencement shall be scheduled at the close of each Quarter for the conferring of degrees upon candidates who have fulfilled all the requirements of their respective curricula.

Attendance at Convocation Exercises—All candidates for degrees are required to be present at their graduation convocation unless excused by the President.

IX. COLLEGE OF EDUCATION CURRICULA— CLASSIFIED COMPLETE LIST

Section IX provides a *complete list* of the *curricula* and *major* and *minor fields of specialization* offered by the College of Education. This serves two purposes:

1. It gives students an over-all view of the offerings of the College which will assist them in deciding upon curricula and majors and minors.
2. It provides an alphabetically arranged list, with page numbers, of curricula and majors and minors which will serve as a convenient guide to Sections X and XI.

The College of Education offers a wide range of curricula for the preparation of teachers for the elementary and secondary schools. These curricula are all four years in length and lead to the degree *Bachelor of Science in Education* and to the appropriate *four-year provisional teacher's certificate*.

The College of Education also presents non-teacher education curricula in the three fields—fine arts, music, and occupational therapy—leading to the appropriate degrees.

These curricula and the pages on which the detailed programs appear in this Bulletin are as follows:

TEACHER EDUCATION CURRICULA

GENERAL SECONDARY CURRICULUM

The function of the General Secondary Curriculum is the preparation of teachers of the academic subjects in the junior and senior high schools. Graduates of this curriculum are eligible for the four-year provisional high-school teachers' certificate, valid for grades VII to XII in the major and minor fields of specialization. The Study-Service curriculum (pages 98 and 99) also offers preparation for teaching at the high school level under these curricula. *Majors* and/or *minors* may be selected in the following subjects for which the recommended programs are presented on the pages indicated:

	<i>Page</i>
Biological Science	53
Chemistry	54
Chemistry-Physics	54
Comprehensive Science	55
English	56
French	62
Geography	57
German	62
History and Government.....	59
Journalism (Minor)	59
Latin	59
Library Science (School)	60
Mathematics	60
Modern Foreign Languages.....	61
Physics	63
Psychology and Guidance	63
Social Studies	58
Spanish	62
Special Education—Slow-learning Children.....	66
Speech	66

SPECIAL CURRICULA

The function of the Special Curricula is the preparation of teachers and supervisors in the "special" subjects. Graduates of these curricula are eligible for the four-year provisional "special" certificate covering teaching of the special subjects in grades I-XII. These *curricula* together with the recommended programs for *minors* in the same fields, appear on the pages indicated:

	<i>Page</i>
Business Education	67
Dental Hygiene Education.....	70
Distributive Education	69
Fine Arts	71
Health Education (School).....	73
Home Economics	75
Industrial Arts Education.....	76
Music—Admission to School of Music.....	77
Music, Vocal, Curriculum I.....	79
Music, Instrumental, Curriculum II.....	82
Music, Vocal and Instrumental, Curriculum III.....	85
Physical Education—Men.....	86
Physical Education—Women.....	88
Physical Education—Men and Women, Dance Major....	89
Radio-Speech Education	90
Speech and Hearing Therapy.....	91
Trade and Industrial Education.....	93

ELEMENTARY CURRICULUM

The Elementary Curriculum is designed for the preparation of teachers, supervisors, and principals of elementary schools, including kindergarten. Graduates of the degree curriculum are eligible for the four-year provisional elementary teacher's certificate.

	<i>Page</i>
Curriculum leading to degree, B.Sc. in Edu.....	94
Arts-Education Curriculum leading to the two degrees, B.A. and B.Sc. in Edu.	95
Study-Service Curriculum leading to degree B.Sc. in Edu.	98
Special Program for temporary certification for teaching in elementary grades.....	99

PROFESSIONAL CURRICULA OTHER THAN
TEACHER EDUCATION

FINE ARTS CURRICULA

The College of Education presents four-year curricula for the preparation of professional artists leading to the degree Bachelor of Fine Arts. These curricula, listed below, are supervised by the School of Fine and Applied Arts, a division of the College of Education.

	<i>Page</i>
Art History.....	101
Ceramic Art.....	102
Commercial Art	102
Costume Design	102
Interior Design.....	102
Medical Art.....	102
Painting	101
Painting, Sculpture and Art History.....	101
Sculpture	101

MUSIC CURRICULUM

The College of Education presents a four-year curriculum for the preparation of professional musicians leading to the degree Bachelor of Music. This curriculum is supervised by the School of Music, a division of the College of Education.

Curriculum V, Bachelor of Music..... 103

Under Curriculum V professional majors are offered in the following special fields of music:

- a. Applied Music with a major in Piano, Organ, Voice, Violin, Viola, Violoncello, Contrabass, Flute, Clarinet, Oboe, Bassoon, French Horn, Trumpet, Trombone, Baritone, Horn, Bass Horn, and percussion instruments.
- b. Music Theory.
- c. Music Composition.
- d. Choral and Church Music.

Full details of the course requirements, entrance requirements, and graduation requirements, may be found in the School of Music bulletin, which may be had upon request. Address, School of Music, Room 105, Hughes Hall.

OCCUPATIONAL THERAPY CURRICULUM

The College of Education offers a curriculum for the preparation of Occupational Therapists, leading to the degree Bachelor of Science in Occupational Therapy.

	<i>Page</i>
Curriculum in Occupational Therapy.....	104

COMBINATION CURRICULA

ARTS-EDUCATION

Four and One-Quarter Years

Because the College of Arts and Sciences and the College of Education have a considerable amount of required work in common, a planned program makes it possible to receive both the Bachelor of Arts degree and some degree offered by the College of Education in a minimum period of thirteen Quarters.

The student should register in *both colleges* as soon as he decides he become a candidate for two degrees—preferably during his freshman year, certainly not later than the beginning of his senior year. To be eligible for the two degrees, the candidate must meet all the specific requirements of the two colleges for the degrees desired, and must secure credit for 30 hours beyond the total number of hours required in either of the two curricula.

Students transferring with advanced credit from other institutions must obtain credit, through residence in the Ohio State University, for at least 45 hours and 90 points in course listed in the Bulletin of the College of Arts and Sciences, and also 45 hours and 90 points in courses listed in the Bulletin of the College of Education.

Arts-Education Curriculum outlines appear on the following pages:

General Secondary Curriculum..... 49

Elementary Education Curriculum..... 94

COMMERCE-EDUCATION

A candidate who has completed all of the requirements of the College of Commerce and Administration in the curriculum in General Business or Accounting, leading to the degree Bachelor of Science in Business Administration, who has completed all of the requirements of the College of Education in a related curriculum in business education leading to the degree, Bachelor of Science in Education, and who has received credit for two hundred forty-one Quarter-hours, including military science, physical education, and hygiene, will be recommended for the two degrees. A student pursuing any other curriculum in the College of Commerce and Administration may likewise become eligible for the two degrees provided his program in the Education teaching fields is approved by the Executive Committee of the College of Education.

Students pursuing the joint curriculum are advised to register in both colleges not later than the beginning of the junior year, if possible. In every case the candidate shall have met all the requirements of the University relating to residence in the colleges conferring the degrees.

TEACHERS' CERTIFICATES

The completion of a College of Education curriculum leading to the degree Bachelor of Science in Education qualifies the graduate for the appropriate provisional teachers' certificate issued by the State Department of Education. This certificate is valid for four years. After three years of successful experience in teaching and additional professional preparation, the teacher may qualify for the eight-year professional certificate and, later, for a permanent teacher's certificate. Under Ohio law, no person can receive compensation for teaching in a school supported wholly or in part by state or federal funds who does not hold a currently valid teacher's certificate.

Completion of the General Secondary Curriculum, pages 49 to 67, qualifies the graduate for the four-year provisional *high school teacher's certificate*. This certificate will indicate the number of hours of college credit completed in each subject of specialization and will be valid for teaching these subjects (designated in the curricula as majors or minors) in the junior and senior high school, i.e., in grades VII through XII.

Completion of a special curriculum, i.e., in business education, dental hygiene education, fine arts, physical and health education, home economics, industrial arts, music, radio, speech education, or speech and hearing therapy, qualifies for the four-year provisional *special teacher's certificate* valid for teaching in grades I through XII. The graduate of a special curriculum who has also completed one or more minors in academic or in additional special fields, is entitled to, and is advised to make application for, a four-year provisional high school teacher's certificate in addition to the special certificate.

Completion of the Elementary Curriculum, pages 94 to 97, qualifies for the four-year provisional elementary teacher's certificate valid for teaching in grades I through VIII, except that it is not valid for teaching in grades VII and VIII of the junior high school if organized on the departmental basis. A provisional *kindergarten-primary teacher's certificate* is necessary for teaching at the kindergarten level. See pages 95 and 97. Completion of the first eight Quarters of the Study Service Curriculum in Elementary Education, qualifies for the Provisional Cadet Elementary Teacher's Certificate valid for four years.

APPLICATION FOR OHIO TEACHER'S CERTIFICATE

The provisional certificate will be issued only *upon application* by the graduate, endorsed by the Secretary of the College of Education. Official application forms with instructions will be mailed to all prospective graduates at the beginning of the Quarter of graduation. If the student contemplates teaching within a year after graduation, the application should be completed and returned to the College Office, 102 Arps Hall, not later than the fourth week of the Quarter. The certificate will then be delivered with the graduation diploma.

CERTIFICATION TO TEACH OUTSIDE OHIO

In general, the pattern of teacher-education curricula offered by the College of Education will qualify the student for the initial college-graduate teacher's certificate in states other than Ohio. However, there are a few states which have enacted laws requiring special courses of local interest, and a few others in which professional requirements in certain areas are somewhat higher than the corresponding course requirements of this College. Consequently, if a student contemplates applying for a teacher's certificate in a state other than Ohio, (a) he should write to the Department of Education of that state not later than his Junior year requesting a Bulletin covering current certification requirements, and (b) he should check with the Secretary of the College of Education regarding any extra courses that may be needed.

X. TEACHER-EDUCATION CURRICULA

Important to Students:

Every student pursuing a teacher-education curriculum, in order to be adequately informed about the requirements of that curriculum, should carefully study:

- (a) The entire section entitled "Summary of Course Requirements in the Teacher-Education Curricula. (Pages 40 to 49.)
- (b) The recommended or required program in his chosen curriculum and (in the General Curriculum) of his chosen majors and/or minors (pages 53 to 100).

The several curricula of the College of Education provide for the varied demands of the public school service. These demands cover the instructional needs of children and youth of pre-school, kindergarten, elementary, and secondary school ages.

The curricula aim to provide prospective teachers with an understanding of the nature and needs of the young and to develop an acquaintance with the most favorable conditions for their growth. They aim to impart to prospective teachers the meaning of education in its relation to desirable social objectives; and, by means of certain technical courses in education, to illustrate interpretative instruction. Curricular provision is made for subject-matter in the fields of specialization.

Provision is also made for a study of education in historical perspective and of organization and administration of schools in relation to the needs of the learner and to social aims. Some provision is made for free electives in recognition of the principle of individual differences and of defects of previous training. The student is advised to review carefully his interests and deficiencies in exercising the elective privilege. The curricula designed primarily as preparation for teaching at the same time enable the student to include as essential elements in his program a substantial proportion of the subjects traditionally classified as liberal or cultural. For example, the curriculum for the preparation of high-school teachers will ordinarily include from 100 to 125 Quarter credit hours, distributed appropriately among the fields of English, foreign languages, mathematics, science, history, and other social studies.

The College of Education assumes that it is both possible and desirable to find, develop, and use educational experiences appropriate for developing a wide range of personal and social characteristics and abilities of students. Accordingly, the College has formulated statements of factors of competency (a) which are deemed desirable for beginning a program of preparation for teaching, or, (b) which may be developed during the period of preparation. While, in the pages which follow, the College program is presented largely in terms of courses, it is anticipated that the student will come to think of the pursuit of a curriculum as a process of development in terms of the factors of competency for teaching.

SUMMARY OF COURSE REQUIREMENTS IN THE TEACHER-EDUCATION CURRICULA

The courses included in the curricula for the preparation of teachers are in five groups, as follows: I. Nonprofessional Courses; II. Teaching fields; III. Professional Courses; IV. General University Requirements; V. Electives.

These requirements for all curricula will now be summarized in order, the summary to be followed by outlines of the curricula and by recommended programs in the major and minor teaching fields.

I. REQUIRED NONPROFESSIONAL COURSES

- (1) English 416, 417, 418. Composition and Reading, three hours each Quarter. Total nine hours.

Required in all curricula. Students will be required to take a test before entering English 416; those who give evidence of high proficiency in writing will be excused from, and will receive credit for, this course. An average of 2.00 or better in the freshman English courses taken at The Ohio State University (English 416, 417, 418) is required. Students who fail to meet this standard must (a) either repeat the course or courses in which a grade of "D" was received, or (b) take English 505, with permission of the student personnel office in order to make the required grade-point average in English. Transfer students from other institutions who have received "K" credit for all three freshman English courses (416, 417, 418) will be considered to have met the required standard for writing skills. The hours of credit in English earned to remove a deficiency will be added to the 196-hour minimum requirement for graduation.

- (2) Social Studies, usually ten hours, as indicated in the curriculum outline.
- (3) Natural Science, ten hours, as indicated in the curriculum outline.
- (4) Psychology 401, General Psychology, five hours. All curricula.

Items (5) and (6) which follow are requirements in the Secondary and Special Curricula, but not in the Education Curriculum.

- (5) Fine Arts, Music, Philosophy, Religion. Nine hours in one or more of these four fields, selected from the following approved list of courses: Fine Arts 401, 421, 423, 431, 432, 484, 485, 494-495-496, 500, 501-502-503, 534.

Music 404, 405, 514, 515, 401, 402, 403.

Philosophy 400, 401, 402, 405, 515, 516, 551, 552.

Religion. Philosophy 406, 653. English 529. Sociology 648. Anthropology 613.

- (6) Free Elective. Three hours.

Courses taken in fulfillment of the nonprofessional requirement may be credited toward the fulfillment of the requirement (a) in the corresponding major teaching field, or (b) in the corresponding minor teaching fields.

II. THE TEACHING FIELDS

Choice of Teaching Fields

Teaching fields should be chosen by the student on the basis of his individual abilities and interests, and also in the light of available information concerning the demand for beginning teachers and the supply in the respective field.

Up-to-date information concerning the supply and demand for teachers in various areas may be obtained by reading the most recent edition of the annual report "Teaching Opportunities," published by the Division of Appointments. Students may obtain copies in Room 111, Arps Hall. Students are also invited to consult with staff members of the Appointments Division concerning current opportunities in different teaching fields.

Not later than the first Quarter of the sophomore year, the student should file in the College Office, for the purpose of record, a statement declaring his choice of teaching fields. For details, see page 29.

Requirements of Different Curricula

General Secondary Curricula (Pages 49-66). In these curricula for teachers in junior and senior high schools, the student must qualify either in (a) two major academic high school teaching fields or (b) in one major high school academic teaching field and two minor teaching fields or (c) in the Social Studies field only (page 58), the comprehensive 80-hour "double major" or (d) one major academic high school teaching field and one minor teaching field. The outlines of the General Secondary Curricula are found on page 49. Immediately following are the outlines of recommended programs and requirements in the different academic teaching field covered by this curriculum (pages 52-67).

Special Curricula (Pages 67-94). In these curricula for teachers and supervisors of business education, fine arts, health education, home economics, industrial arts, music, physical education, radio-speech, speech and hearing therapy, specialization in only one teaching field is required. However, in many cases it is strongly recommended that the student shall achieve preparation in at least one additional minor teaching field. When selecting a second field of preparation, the student should consult his adviser.

Elementary Curriculum (Pages 94-97). In the curriculum for teachers in elementary schools, all required courses are indicated in the curriculum outline except that the student must elect twenty hours of advanced courses in some one selected field in addition to courses that are specifically required.

Standard of Achievement Required in the Teaching Field

Admission to Student Teaching. For all students pursuing the General Secondary Curriculum or a special curriculum, an average point-hour ratio of 2.25 in the required professional courses and an average point-ratio of 2.25 in the major teaching field(s) on all courses taken at this University will be required for admission to supervised student teaching (Education 520, 536, and 537. Students in the General Secondary Curriculum who elect two majors must have attained the point-hour average of 2.25 in each of the major teaching fields as a prerequisite for admission to supervised student teaching in either field.

For all students pursuing the elementary curriculum an average point-hour ratio of 2.25 on all required professional courses taken at this University will be required for admission to supervised student teaching (Education 518).

Specific area requirements and additional general requirements for admission to any course in student teaching may be obtained in mimeographed form from the Office of Student Field Experience, Room 103, Arps Hall.

Graduation. To be approved for the degree Bachelor of Science in Education, students completing any of the teacher-education curricula must have attained a point-hour ratio of 2.25 on the *completed* teaching fields as follows: In the General Secondary Curriculum a point-hour ratio of 2.25 in each of the completed, required, majors or minors; in the Special Curricula a point-hour

ratio of 2.25 on the entire group of courses constituting the required major; in the Elementary Curriculum a point-hour ratio of 2.25 on the completed group of required professional courses.

Transfer Students. The 2.25 average point-hour ratio required for admission to student teaching or for graduation, in the case of students who have transferred to the College of Education, shall be computed upon *all* courses in the respective fields taken at this University regardless of the Quarter in which such courses were elected.

Students transferring from other institutions and requesting credit for Education 536, 520 or 518 will be required to fulfill the 2.25 point-hour ratio before such credit shall be granted. Application of the rule to transferred students for this purpose shall terminate at the close of the Quarter preceding the Quarter of graduation.

Minor Teaching Fields

Both the general secondary and special curricula recognize the principle that adequate preparation cannot be provided in more than two teaching fields within the limit of the four-year curricula. However, there are numerous instances, particularly in Ohio, in which beginning high school teachers of academic subjects, in their first year of teaching, are assigned to teach in at least three different fields. Beginning teachers of special subjects are frequently expected to teach in at least one additional field. In view of this situation the College will recognize as a minor teaching field and will certify to the State Department of Education as meeting the minimum requirement for certification, any subject or subjects additional to the required majors or minors in which the student (a) has met the minimum course requirement as defined by the College of Education and (b) has attained a point-hour average of not less than 2.25 in subject matter courses.

Academic Subjects. The requirement varies from 23 to 41 Quarter hours of collegiate credit, in addition to any prerequisite high school credit, for each minor teaching field is required.

Special Subjects. The minimum collegiate credit required for certification (minor) in the special subjects also varies. In most fields the credits presented must be approved by the appropriate adviser, as satisfying the certification standards of the State Department of Education. In each field a *teaching methods* course is required and is included within the total. No high school prerequisite is required. Any variation from the recommended program must be approved by the appropriate departmental adviser and the Secretary of the College.

North Central Association Standards. The current standards for minor teaching fields as defined in this bulletin meet the minimum standards of "preparation of the instructional staff" set by the North Central Association of Colleges and Secondary Schools, as adopted March 11, 1948, and published in the Association's 1954-1955 bulletin, "Policies, Regulations, and Criteria for the Approval of Secondary Schools."

III. REQUIRED PROFESSIONAL COURSES

The required professional courses vary with the different curricula. Each of the curriculum outlines, pages 49-99, indicates the professional courses specifically required by that curriculum.

A point-hour average of 2.25 on the group of professional courses is required for admission to student teaching.

Courses Required in General Secondary and Special Curricula

The following professional courses are required in the General Secondary Curriculum and in most of the Special curricula:

Education 408	3 hours
Psychology 407 (Educational Psychology)	5 hours
Education 533 (The Theory and Practices in Secondary School Teaching)	4 hours
Education 534 (The Theory and Practices in Secondary School Teaching—Continued)	4 hours
Methods course (s) in each teaching field	3 to 20 hours
Education 536 or 537 (Student Teaching in Secondary Schools)	9 hours
Education 607 (Philosophy of Education)	3 hours
Education 632 (The History of Modern Education or Education 636 (Historical Foundations of American Education)	4 hours
Physical Education 610 (Health Education for Secondary Teachers)	3 hours
Professional Electives	3 hours

Courses Required in Elementary Curriculum

Professional courses required in the Curriculum in Elementary Education are listed in the curriculum outline, pages 94-97.

Field Experience

Students in all curricula are urged to participate as extensively as possible in school or community service as a part of the preparation of teaching. *Each student is required* to attain a reasonable level of competence in working with children and adults, and to have some paid work experience before being admitted to student teaching. The plan for meeting this Field Experience Prerequisite for Student Teaching described on page 29 becomes a formal curriculum requirement which must be completed at least one Quarter prior to the Quarter in which he enrolls in student teaching.

Particular emphasis is placed, at the beginning of the sophomore year, on participation in public schools in September prior to the opening of the University. The course, Education 502, Interpretation of Field Experience in Schools, enables students to obtain course credit for this type of exploratory experience in schools.

Another type of field experience which is especially recommended is Education 505, Field Service Projects in Education. In this course students may secure first hand contact with children or youth and receive training and experience in group leadership.

Information about these and other types of field laboratory experiences may be obtained in Room 103, Arps Hall.

Professional Electives

Several of the curricula on pages 34-94 include a specified number of hours as "professional elective." The "Approved List" of courses which are accepted as professional electives is as follows: courses in Education (except 401, 402, 403, 404, 405, 406, 440, 441, 442, 443, 444, 445, 446, 471, 472, and 473); Psychology 408, 521, 581, 608, 609, 610, 611, 613, 615, 622, 628, 631, 640, 644, 663, 668, 670, 671, 674, 676, 680, 683, 684, 690, 703, 781, 785; Sociology 407 (unless counted toward the social science requirement), 678, 680; Speech 504.

IV. GENERAL UNIVERSITY REQUIREMENTS

Physical Education: Women—First and Second Years—6 Quarters; Men—First Year—3 Quarters.

Physical Education 400; All students—First Year.

Military Science: Men—First and Second Years—6 Quarters.

Certain exceptions to the foregoing requirements apply in the cases of students over twenty-five years of age, and of students entering the University with advanced standing.

V. ELECTIVES IN THE CURRICULUM OUTLINE

When the words "elective" appears in a given Quarter of the curriculum outline, it means that out of the fifteen or more hours for which the student will normally register in that Quarter, a certain number may be used in some way not definitely prescribed in advance.

- A. The student is free to elect courses designed to meet some *group requirement*, as for example, courses within the teaching fields which the student has chosen.
- B. The student is free to choose electives designed to assist him in becoming more competent as a contributing member of a school community.

It is the responsibility of the student with the help of his advisers to decide upon the program of electives that best meets his needs. The student should consider his *purposes and interests*, his strengths and weaknesses, and the type of position he is most likely to fill. The following lists of electives are suggestive in terms of the student's purposes.

In the following lists *some* of the courses mentioned, i.e. only those which occur in the "approved list" of professional electives (page 43) may be counted for *professional* elective credit.

1. Courses and minor problems designed to provide for increased facility in dealing with problems of child growth and development, such as: *Providing for Individual Differences*, Psychology 610, 663, 670, 676, 650; Education 513; Home Economics 561, 661; Education 766, 600. *Diagnosis and Treatment*, Psychology 408, 411, 615, 671, 650. *Special Aspects of Human Development*, Psychology 683, 628, 650. *Gifted and Handicapped Children*, Psychology 609, 611, 622, 650.
2. Courses and minor problems designed to provide increased facility in dealing with general functions of the school in which all or nearly all teachers are called upon to participate, such as: *The School Library*, Education 503, 550, 645, 646, 647, 648. *Visual and Radio Education*, Education 600s, 600j, 601, 602. *Journalism*, Education 674; Journalism 508. *Speech and Dramatics*, Speech 504, 521. *Guidance and Counseling*, Education 750, 751, 752; *Assistance in Counseling*, Psychology 581, 631, 671, 674, 684, 690, 781, 785; Physical Education 560. *School-Community Relationships, General Citizenship, and Rural Life*, Sociology 600, 645; Social Administration 647; Rural Sociology 505, 606; Education 624, *Problems of the Teaching Staff*, Education 699; *Philosophy of Education*, Education 757, 758, 759, 760; Philosophy 516; *Measurement and Evaluation*, Psychology 608, 613, 680. *Unified Studies*, Education 600f, 676. *Health*, Physical Education 644, 609, 610. *Consumer Problems*, Economics 645. *Labor Problems*, Economics 402.
- C. In addition to the courses suggested in the preceding paragraphs, many courses are available in a wide range of departments which will give the student an insight into new and interesting fields of study and should develop an increased sensitivity to cultural values. Students are encouraged to include in their programs a number of such electives. These courses may or may not be related to the students' fields of spe-

cialization. The following list, which necessarily duplicates in a few instances the suggestions in the preceding paragraphs, will help in choosing electives.

SUGGESTED ELECTIVES

ACCOUNTING

- 405. Outline of Accounting. Five credit hours.

ANATOMY

- 504. Elementary Anatomy. Five credit hours.

ANTHROPOLOGY

- 501. Introduction to Anthropology. Five credit hours.
- 502. Introduction to Physical Anthropology. Five credit hours.
- 503. Introduction to Ethnology. Five credit hours.

ARTS SURVEY

- 605. Foundations of Contemporary Civilization. Five credit hours.
- 608. Development of Modern Science. Five credit hours.

ASTRONOMY

- 500. Descriptive Astronomy. Five credit hours.

BACTERIOLOGY

- 509. Microbiology in Relation to Man. Five credit hours.

BOTANY

- 401. General Botany. Five credit hours.
- 402. General Botany. Five credit hours.
- 406. Local Flora. Five credit hours.

BUSINESS ORGANIZATION

- 401. Introduction to Business. Five credit hours.
- 551. Personal Finance. Three credit hours.

CHEMISTRY

- 407. Elementary Chemistry. Five credit hours.
- 408. Elementary Chemistry. Five credit hours.

COMPARATIVE LITERATURE AND LANGUAGES

- 401-402-403. Introduction to Western European Literature. Three credit hours.

CONSERVATION

- 401. Introduction to Conservation of Basic Natural Resources. Three credit hours.

ECONOMICS

- 400. Development of Modern Economic Society. Five credit hours.
- 406. Outlines of Economics. Five credit hours.
- 509. Outlines of Public Finance. Five credit hours.
- 510. Problems of Labor. Five credit hours.
- 515. International Economic Relations. Three credit hours.
- 520. Money and Banking. Five credit hours.

ENGINEERING DRAWING

- 400. Elementary Engineering Drawing. Four credit hours.
- 402. Principles of Engineering Drawing. Four credit hours.
- 416. Elements of Drawing and Lettering. Two credit hours.
- 538. House Planning. Three credit hours.

ENGLISH

- 501. Readings in Recent Drama. Three credit hours.
- 502. Readings in Recent Prose Fiction. Three credit hours.
- 505. Informative Writing. Five credit hours.
- 507. Narrative Writing. Five credit hours.
- 510. Introduction to American Literature I. Three credit hours.
- 511. Introduction to American Literature II. Three credit hours.
- 520. The Reading of Poetry. Three credit hours.
- 521. Introduction to Fiction. Three credit hours.
- 529. The English Bible. Five credit hours.
- 540. Masters of Modern Literature. Five credit hours.
- 550. Introduction to Shakespeare. Five credit hours.

ENTOMOLOGY

- 550. General Entomology. Five credit hours.

FINE ARTS

- 401. Introduction to Fine Art Activities. Three credit hours.
- 421. Basic Art—Drawing and Fine Arts Orientation. Five credit hours.
- 423. Basic Art—Drawing. Five credit hours.
- 430. Fundamentals of Art. Five credit hours.
- 431. Basic Art—Elementary Design. Five credit hours.
- 432. Basic Art—Intermediate Design. Five credit hours.
- 437. Costume Design. Three credit hours.
- 484. An Introduction to Ceramic Art. Three credit hours.
- 485. Ceramic Laboratory. Five credit hours.
- 494. Introduction to Art. Three credit hours.
- 495. The Development of Modern Art. Three credit hours.
- 496. Contemporary Art. Three credit hours.
- 501. History of the Fine Arts Through the Ages. Three credit hours.
- 502. History of the Fine Arts Through the Ages. Three credit hours.
- 503. History of the Fine Arts Through the Ages. Three credit hours.
- 532. History of Costume Design. Five credit hours.

FOREIGN LANGUAGES

French 401, 402, 403, 404, 410, 517.

German 401, 402, 403, 404, 412.

Greek 401, 402.

Italian 401, 402, 503.

Latin 401, 402, 404, 405.

Russian 412, 413, 414.

Spanish 401, 402, 403, 404, 410, 517.

GENERAL STUDIES

431-432. Nature of the Physical World. Five credit hours.

520. Factors in Successful Marriage. Three credit hours.

GEOGRAPHY

401. Introduction to Geography. Five credit hours.

403. Economic Geography. Five credit hours.

505. Geography of the United States and Canada. Three credit hours.

GEOLOGY

- 401. Elementary Physical Geology. Five credit hours.
- 402. Elementary Historical Geology. Five credit hours.
- 451. Introduction to Geology. Five credit hours.

HISTORY

- 401-402. History of Western Civilization (1500 to the Present). Five credit hours.
- 403-404. History of the United States (1763 to the Present). Five credit hours.
- 421-422-423. The Western World in Modern Times. Five credit hours.
- 501. Social and Cultural History of Modern Europe. Five credit hours.
- 537. Recent History of the United States (1898-1928). Three credit hours.
- 538. Recent History of the United States (Since 1928). Three credit hours.
- 590. Contemporary Europe (1920 to the Present). Three credit hours.
- 689. The History of Ohio. Three credit hours.

HOME ECONOMICS

- 401. Textiles. Three credit hours.
- 405. Elements of Family Living. Three credit hours.
- 430. Introduction to Clothing and Textiles. Five credit hours.
- 440. Introduction to Nutrition and Foods. Five credit hours.
- 450. The House. Three credit hours.
- 506. Household Equipment. Five credit hours.
- 513. Furnishing the Home. Three credit hours.
- 514. Clothing: Elementary Construction. Three credit hours.
- 518. Elements of Homemaking. Three credit hours.
- 561. Introduction to Child Development. Three credit hours.

INTERNATIONAL STUDIES

- 410. Basic Issues in World Affairs. Two credit hours.

JOURNALISM

- 401. Introduction to Journalism. Two credit hours.
- 402. Elementary Reporting. Four credit hours.

LANDSCAPE ARCHITECTURE

- 500. Appreciation of Landscape Design. Two credit hours.

MATHEMATICS

- 416. First Year College Mathematics. Five credit hours.
- 417. First Year College Mathematics. Five credit hours.
- 418. First Year College Mathematics. Five credit hours.
- 429. Mathematics of Finance. Five credit hours.

MUSIC

- 404. The Appreciation of Music. Three credit hours.
- 405. The Appreciation of Music. Three credit hours.
- 505. A Survey of Music Literature. Three credit hours.
 - A. University Choruses. One credit hour.
 - B. University Orchestras. One credit hour.
 - C. The University Marching Band. One credit hour.
 - D. University Bands. One credit hour.
 - F. University Small Ensembles. One credit hour.

PHILOSOPHY

- 400. Types of Philosophy. Three credit hours.
- 401. Introduction to Philosophy. Five credit hours.
- 402. Introduction to Logic. Five credit hours.
- 405. Introduction to Ethics. Five credit hours.
- 406. Religious Questions. Three credit hours.

PHYSICAL EDUCATION

- 473. First Aid (Men and Women). One credit hour.
- 560. Camp Counseling (Men and Women). Three credit hours.
- 649. Camp Administration (Men and Women). Three credit hours.

PHYSICS

- 411. General Physics: Mechanics, Wave Motion, and Sound. Five credit hours.
- 412. General Physics: Heat, Light, Spectroscopy. Five credit hours.
- 413. General Physics: Magnetism, Electricity, and Electronics. Five credit hours.
- 420. Descriptive Meteorology. Five credit hours.

PHYSIOLOGY

- 421. Introduction to Physiology. Five credit hours.
- 422. Introduction to Physiology. Five credit hours.

POLITICAL SCIENCE

- 401. American National Government. Five credit hours.
- 509. Foreign Governments and Politics. Five credit hours.
- 510. American State and Local Government. Five credit hours.
- 599. Introduction to Political Science. Three credit hours.
- 607. American Municipal Government. Five credit hours.

PSYCHOLOGY

- 402. General Psychology. Five credit hours.
- 408. Mental Hygiene. Three credit hours.
- 409. Introduction to Applied Psychology. Three credit hours.
- 411. Psychology of Effective Student Adjustment. Three credit hours.
- 405. Introduction to Radio. Two credit hours.

RADIO

- 405. Introduction to Radio. Two credit hours.

SOCIOLOGY

- 401. Introductory Sociology. Five credit hours.
- 402. Social Trends and Problems. Five credit hours.
- 505. The Sociology of Urban Life. Five credit hours.
- 510. The Standard of Living. Four credit hours.

SPEECH

- 401. Principles and Practice of Effective Speaking I and II. Five credit hours.
- 402. Principles and Practice of Effective Speaking I and II. Five credit hours.
- 470. Argumentation and Debate. Five credit hours.
- 501. Principles of Effective Speaking. Three credit hours.
- 504. Speech Functions and Responsibilities of the Teacher. Three credit hours.

- 505. Oral Interpretation. Five credit hours.
- 511. Parliamentary Law. Two credit hours.
- 521. Acting I. Three credit hours.
- 522. Acting II. Three credit hours.
- 541. Elementary Stagecraft. Three credit hours.
- 560. Radio Speech. Three credit hours.
- 580. Bases of Speech Production. Five credit hours.
- 590. Speech Development in Children. Three credit hours.

ZOOLOGY

- 401-402. General Zoology. Five credit hours.
- 403. General Principles of Heredity. Five credit hours.
- 508. Ornithology. Three credit hours.
- 509. Evolution. Five credit hours.
- 512. Heredity and Its Human Relations. Five credit hours.

GENERAL SECONDARY CURRICULUM

FOR HIGH SCHOOL TEACHERS OF ACADEMIC SUBJECTS

Curriculum I leads to the degree Bachelor of Science in Education. Curriculum II, administered jointly by the College of Education and the College of Arts and Sciences, leads to the two degrees Bachelor of Science in Education and Bachelor of Arts. General Secondary Program III leads to the degree Bachelor of Science in Education and is open to graduates of the College of Arts and Sciences.

GENERAL SECONDARY CURRICULUM I

LEADING TO THE DEGREE BACHELOR OF SCIENCE IN EDUCATION

Teaching Fields: Students in the General Secondary Curriculum may satisfy the requirements in the teaching fields by completing any one of the following four options: (a) *two major* academic high school teaching fields or (b) *one major* high school academic teaching field and *two minor* teaching fields or (c) in the Social Studies field only (page 58) the comprehensive *80-hours "double major"* or (d) *one major* academic high school teaching field and *one minor* teaching field; this minor shall include all subject matter and professional courses listed as required in the standard programs for the *minor* teaching fields, pages 53-91, and additional courses, if necessary, to make a total of 30 Quarter hours in *subject matter* courses. The student (under option d) must also include in his total program at least 9 Quarter hours of *free electives* in non-professional areas outside his fields of specialization.

All students who have entered the College of Education in the Winter Quarter 1956, or later, and who elect one or more minors, are subject to the requirements announced in this—1956-1957—Bulletin. These minor requirements in most subjects were increased effective January 1, 1956. (See 1955-1956 Bulletin, page 41).

For a complete list of approved majors and minors in this curriculum, refer to page 34. Recommended programs in the various "academic" major and minor teaching fields are outlined on pages 53-67. The provisional high school certificate will include a statement of the number of credit hours completed in each major and minor field of specialization.

COLLEGE OF EDUCATION

FIRST YEAR

Education	(408) 3	English	(417) 3	English	(418) 3
English	(416) 3	†Science	5	†Science	5
Psychology	(401) 5	Military or Air Science	2	Psychology	(407) 5
Military or Air Science	2	Physical Education	1	Military or Air Science	2
Physical Education	1	Physical Education	(400) 1	Physical Education	1
*Elective	5	Elective	5	Elective	3

SECOND YEAR

†Social Science	5	Education	(533) 4	Education	(534) 4
Military or Air Science	2	†Social Science	5	Military or Air Science	2
Physical Edu. (Women)	1	Military or Air Science	2	Physical Edu. (Women)	1
Elective	10	Physical Edu. (Women)	1	Elective	11
		Elective	6		

THIRD YEAR

Elective	16	Elective	15	Teaching Methods Course	3 or 5
				Elective	12

FOURTH YEAR

Physical Education	(610) 3	Education	(632 or 636) 4	Education	(607) 3
Teaching Methods Course	3 or 5	Elective	10	Elective	12
Education	(536) 8				
Professional Elective	2				

* Electives. From the hours designated as "elective" the student is to select (a) those courses needed to complete his program in the teaching fields; (b) nine hours of courses in the Fine Arts-Music-Philosophy-Religion group (see pages 46 to 48); and (c) free electives.

† Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, General Studies 431, 432; Geology 451 and Anthropology 502 or other appropriate five-hour course.

‡ Social Science. Economics 401-402; Sociology 401 and either 402 or 407; Political Science 401 and either 509 or 410; Sociology 401 and Anthropology 501; or Sociology 401 and Economics 406. (Sociology 401 and Economics 406 will complete the prerequisites for "600" courses in either subject.)

FRESHMAN ELECTIVES

Students who expect to specialize in the academic fields given below should complete their first Quarter schedule from the courses listed under each field.

English: English 416.

Classical and Modern Languages: Students who wish to specialize in a classical language or a modern language and have no high school entrance credit should register for the 401 courses—Latin 401, French 401, Spanish 401, etc. Those who enter with one unit should register for the 402 courses. Students with two units should register for the 403 courses, and students with three units should schedule the 404 courses.

Mathematics: Mathematics 416.

Biological Science: Botany 401 or Zoology 401.

Chemistry: Chemistry 411.

Physics: Physics 411.

History and Other Social Studies: History 401 or 403 or 421.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

GENERAL SECONDARY CURRICULUM II

LEADING TO THE TWO DEGREES

BACHELOR OF ARTS AND BACHELOR OF SCIENCE IN EDUCATION

The student pursuing this curriculum should register in both Colleges—Arts and Sciences, and Education—as soon as he has decided to become a candidate for the two degrees. The program of study each Quarter must be approved by appropriate advisers and by the Secretaries of both Colleges.

A student completing this combination curriculum will satisfy (a) the

requirements of the College of Arts and Sciences for the degree Bachelor of Arts as outlined in the Bulletin of the College of Arts and Sciences and (b) the requirements of the General Secondary Curriculum of the College of Education leading to the degree of Bachelor of Science in Education.

The student's program can be planned so that the two degrees may be conferred simultaneously, or, if preferred, at different Convocations. However, a student who has completed the course in student teaching will not be recommended for the degree Bachelor of Arts until he has met all requirements for the degree Bachelor of Science in Education.

The College of Education requires that the student shall complete any one of the following four options: (a) *two major* academic high school teaching fields or (b) *one major* high school academic teaching field and *two minor* teaching fields or (c) in the Social Studies field only (page 58) the comprehensive 80-hour "double major" or (d) *one major* academic high school teaching field and *one minor* teaching field; this minor shall include all subject matter and professional courses listed as required in the standard programs for the *minor* teaching fields, pages 53-90, and additional courses, if necessary, to make a total of 30 Quarter hours in *subject matter* courses. The student (under option d) must also include in his total program at least 9 Quarter hours of *free electives* in non-professional areas outside his fields of specialization.

All students who have entered the College of Education in the Winter Quarter 1956, or later, and who elect one or more minors, are subject to the requirements announced in this—1956-1957—Bulletin. These minor requirements in most subjects were increased, effective January 1, 1956 (see 1955-1956 Bulletin, page 42).

For a complete list of approved majors and minors in this curriculum, refer to page 34. Recommended programs in the various "academic" major teaching fields are outlined on pages 53 to 67. The provisional high school certificate will include a statement of the number of credit hours completed in each major and minor field of specialization.

The curriculum outline as printed here covers fourteen Quarters of residence. However, able students may seek approval for heavier loads in any Quarter except the one in which student teaching (Education 536) is scheduled, and complete the program in approximately thirteen Quarters.

First Quarter		Second Quarter		Third Quarter	
History	(421) 5	History	(422) 5	History	(423) 5
English	(416) 3	English	(417) 3	English	(418) 3
Foreign Language I	5	Foreign Language II	5	Foreign Language III	5
Arts Survey	(401) 1	Physical Edu.	(402 or 422) 1	Physical Edu.	(403 or 423) 1
Physical Edu.	(401 or 421) 1	Military or Air Science	2	Military or Air Science	2
Military or Air Science	2				
Fourth Quarter		Fifth Quarter		Sixth Quarter	
Sociology	(507) 5	Political Science	(507) 5	Economics	(507) 5
Psychology	(401 or 403) 5	Psychology	(407) 5	Natural Science	5
Foreign Language IV	5	†Natural Science	5	Natural Science	5
Physical Edu. (Women)	1	Physical Edu. (Women)	1	Physical Edu. (Women)	1
Military or Air Science	2	Military or Air Science	2	Military or Air Science	2
Seventh Quarter		Eighth Quarter		Ninth Quarter	
‡Major	5	Major	5	Major	5
English	(505) 5	Education	(534) 4	Philosophy	(552) 3
Education	(533) 4	Humanities	8	Humanities	7 or 8
Philosophy	(511) 3				

† Natural Science. See the College of Arts and Sciences Bulletin.

‡ Major: For definition and requirements of the majors, see the Bulletin of the College of Arts and Sciences, and the Bulletin of the College of Education, pages 53 to 67. The student is advised to consult major advisers in each of the Colleges with a view of consolidating these two majors as much as possible.

Tenth Quarter		Eleventh Quarter		Twelfth Quarter	
Major	5	Major	5	Major	5
Arts Survey	(608) 5	Major	5	Physical Education	(610) 3
‡ Elective	5	Education	(632 or 636) 4	Teaching Methods	3 or 5
		Elective	3	Elective	5
Thirteenth Quarter		Fourteenth Quarter			
Teaching Methods	3 or 5	Education	(607) 3		
** Education	(536) 9	Major	5		
Elective	5 or 3	Elective	3		

‡ Electives. From the hours designated as elective, the student is to elect (a) those courses needed to complete his program in the teaching fields of the Education curriculum and (b) free electives. The same course may be used to satisfy the Arts College requirement in humanities, in the major, and the Education requirement in a teaching field.

|| All students must complete registration with the Division of Appointments, Room 111, Arps Hall, before presenting the schedule for the last Quarter for approval.

** For admission to student teaching, the College of Education requires a minimum point-hour ratio of 2.25 in the group of required professional courses, and a minimum point-hour ratio of 2.25 in the major teaching fields or in each of his two majors if he is taking two majors. (Paragraph 10 (b), page 31, Education Bulletin.

REQUIREMENTS FOR DEGREES

Upon the satisfactory completion of two hundred and twenty-six Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the two degrees Bachelor of Arts and Bachelor of Science in Education.

GENERAL SECONDARY PROGRAM III

THREE-QUARTERS PROGRAM, FOR GRADUATES OF THE COLLEGE OF ARTS AND SCIENCES, LEADING TO THE DEGREE BACHELOR OF SCIENCE IN EDUCATION

Graduates of the College of Arts and Sciences of The Ohio State University, who hold the degree Bachelor of Arts or Bachelor of Science, may enroll in the College of Education and qualify for the degree Bachelor of Science in Education and for the four-year provisional high school teacher's certificate (see page 37). The graduate of the College of Arts and Sciences who has completed a major in a field corresponding to a certifiable high school teaching field, may ordinarily complete this program in three Quarters of full-time work in the College of Education. This program represents a modification of General Secondary Curriculum I adapted to the background and professional needs of graduates of the College of Arts and Sciences.

Only those graduates of the College of Arts and Sciences will be admitted who (a) have a point-hour ratio of at least 2.25 in their major teaching field and (b) possess the personal qualifications essential for secondary school teaching.

Further information regarding the program may be obtained by writing to or conferring with the Secretary of the College of Education, 107 Arps Hall.

This program is open only to *graduates* of the College of Arts and Sciences. *Undergraduates* in the College of Arts and Sciences who wish to prepare for teaching in high school are advised to consider the Arts-Education General Secondary Curriculum II, which leads concurrently to degrees in the two colleges. (Education Bulletin, p. 50.) See also College of Arts and Sciences Bulletin.

STUDY-SERVICE CURRICULUM

The College of Education offers a new program of study and teaching service leading to the degree Bachelor of Science in Education. Completion of the full program will qualify for teaching in the elementary and junior high schools and in one teaching area in the senior high schools. The program appears on pages 97-100 of this bulletin.

RECOMMENDED PROGRAMS IN ACADEMIC TEACHING FIELDS IN GENERAL SECONDARY CURRICULUM

BIOLOGICAL SCIENCE—MAJOR TEACHING FIELD

Botany 401, 402—General Botany	10 hours
Zoology 401, 402—General Zoology	10 hours
Botany 406—Local Flora	5 hours
Zoology 508—Ornithology	3 hours
Entomology 550—General Entomology	5 hours
Bacteriology 509—Microbiology in Relation to Man or	
Bacteriology 607—General Bacteriology	5 hours
One additional course from suggested list below	5 hours
Minimum Total Requirement	43 hours
Teaching Methods Course—Education 683	

If possible, and to be better qualified as a high school biology teacher, ten or more Quarter hours should be elected from the following:

- Anatomy 504
- Physiology 421, 422, or 506, 507—Intermediate Physiology
- Botany 605, 606—Plant Physiology
- Zoology 402—General Principles of Heredity
- Zoology 609—Animal Microtechnic
or
- Zoology 625-626-627—Advanced Zoology of Invertebrates
or
- Zoology 620—Advanced Zoology of Vertebrates
- Botany 613-614—General Morphology
- Botany 615—Plant Microtechnic
or any of the "600" courses in botany, physiology, zoology, or
bacteriology, subject to the approval of the student's adviser.

Students specializing in biological science are expected to have a satisfactory knowledge of elementary chemistry. College credit in Chemistry 411 and 412, or 407 and 408, or one unit of high school credit in chemistry and satisfactory achievement on a chemistry placement test will meet this requirement. This placement test will be given by the Department of Chemistry at the beginning of each Quarter. Application to take the test should be filed in the office of the Division of General Chemistry, Room 115, McPherson Chemical Laboratory, by the first day of the Quarter.

BIOLOGICAL SCIENCE—MINOR TEACHING FIELD

Minimum requirement: 30 Quarter credit hours

Botany 401, 402—General Botany	10 hours
Zoology 401, 402—General Zoology	10 hours
Additional courses from suggested list below	10 hours

Required Education Course:

Education 540—Problems in the Teaching of Biological Science	3 hours
Education 683—The Teaching of Biology	3 hours

Additional Courses Suggested:

- Bacteriology 509 or Bacteriology 607; Botany 406;
- Entomology 550; Zoology 403, 508

CHEMISTRY MAJOR TEACHING FIELD**Required Chemistry Courses**

Chemistry 411, 412, 413—General Chemistry	15 hours
Chemistry 451, 452—Organic Chemistry	10 hours
And Either:	
(a) Chemistry 421, 422, 433, Quantitative Chemistry, 12 hours, or	
(b) Chemistry 421, 422, 6 hours, and Chemistry 681, 682, 683, Physical Chemistry, 9 hours	12-15 hours
Minimum Total Chemistry Courses	37-40 hours

Required Education Courses

Education 684—The Teaching of General and Physical Science	3 hours
Education 681—Laboratory Practicum for Teachers of Science	3 hours

Recommended Education Courses

Education 680—Science Materials for Junior and Senior High Schools	3 hours
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CHEMISTRY—MINOR TEACHING FIELD**Required Courses**

Chemistry 411, 412—General Chemistry	10 hours
Chemistry 413—Qualitative Analysis	5 hours
Chemistry 451, 452—Organic Chemistry	
or	
Chemistry 670—Physical Chemistry	
or	
Chemistry 647, 648, 649, 650—Organic Chemistry	
or	
Agricultural Biochemistry 410, 411	15 hours
Minimum Total	30 hours

Required Education Course

Education 684—The Teaching of General and Physical Science	
or	
Education 680—Science Materials for Junior and Senior High Schools	
or	
Education 681—Laboratory Practicum for Teachers of Science	3 hours

CHEMISTRY-PHYSICS—MAJOR TEACHING FIELD

The following program in Chemistry and Physics is accepted as representing the minimum of preparation for Physical Sciences as a teaching field (major).

Required Science Courses

Chemistry 411, 412—General Chemistry	10 hours
Chemistry 413—Qualitative Analysis	5 hours
Chemistry 451, 452—Organic Chemistry	10 hours
Physics 411, 412, 413—General Physics	15 hours
Physics 616—Advanced Physical Laboratory	3 hours
Physics—elective approved by adviser, minimum	4 hours
Minimum Total Requirement	47 hours

Required Education Courses

Education 681—Laboratory Practicum for Teachers of Science	8 hours
Education 684—Teaching Methods Course	8 hours

Recommended Education Course

Education 680—Science Materials for Junior and Senior High Schools	8 hours
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It is recommended that students electing mathematics as a teaching field or as a minor shall elect, in addition to the foregoing sequence, Chemistry 670, Physical Chemistry or one or more of the series of courses, Chemistry 681, 682, 683—Physical Chemistry. The election of one or two Quarters of quantitative analysis is also recommended.

An average point-hour ratio of 2.25 in the group of courses in chemistry and an average point-hour ratio of 2.25 in the group of courses in physics is required for admission to student teaching in either subject and for graduation.

CHEMISTRY PHYSICS—MINOR TEACHING FIELD

Chemistry 411, 412—General Chemistry	10 hours
Chemistry 451—Organic Chemistry	
or	
Agricultural Biochemistry 410, 411—General	
Agricultural Biochemistry	5 hours
Physics 411, 412, 413—General Physics	15 hours
Physics—elective approved by adviser, minimum	5 hours

Minimum total requirement	25 hours
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Required Education Course

Education 684—Teaching of General and Physical Science, or with approval adviser, either	
Education 680—Science Materials for Junior and Senior High School, or	
Education 681—Laboratory Practicum for Teachers of Science	8 hours

Certification in Component Sciences

When General Science is used as the only major teaching field in science, courses which are included within the program of this major, having a group point-hour average of 2.25, may be used to meet requirements for *certification* in the respective science field, i.e., biology, chemistry, physics, and chemistry-physics; they may not, however, be used to meet the College *curriculum* requirements for minors in these fields.

COMPREHENSIVE SCIENCE—MAJOR TEACHING FIELD

The comprehensive science major provides for a depth of study in at least one field of science and a broad preparation in several fields. The courses to be studied are divided into groups A and B, as shown below.

Group A. Physics, Chemistry and Biological Science.....54 Quarter hours
Distributed as follows: 30 Quarter hours in one of these three sciences, with 12
Quarter hours in each of the other two.

Available courses in each science:

Physics

Physics 411, 412, 413; 420, 601, 614; Physics 616, -b, -c, -e, —Advanced Physical Laboratory (not to exceed 6 hours); Physics 645.

Chemistry

Chemistry 411, 412, 413, 421, 422, 423, 451, 452, 670; Agricultural Biochemistry 410, 411.

Biological Sciences

Botany 401, 402, 406; Zoology 401, 402, 403, 508; Bacteriology 509 or 607; Physiology 421, 422; Entomology 550.

If Biological Science is a 12-hour field, the courses elected must come from both Botany and Zoology.

Group B. Related Science 15 Quarter hours
 Geology 451; Astronomy 500; Conservation 401, 514.

Required Education Courses

Education 684—The Teaching of General and Physical Science

or

Education 682—The Teaching of Biology

Education 681—Laboratory Practicum for Teachers of Science

Recommended Education Courses

Education 540—Problems in the Teaching of Biological Science

Education 680—Science Materials for Junior and Senior High Schools

When Comprehensive Science is used as the only major teaching field in science, courses which are included within the program of this major, having a group point-hour average of 2.25, may be used to meet requirements for certification in the respective science field, i.e., biology and physical science; they may not, however, be used to meet the College curriculum requirements for minors in these fields.

Any modification of this program must be approved by one of the area advisers (Room 207 or 208, Communications Laboratory).

COMPREHENSIVE SCIENCE—MINOR TEACHING FIELD

The following courses constitute a minimum program for a comprehensive science minor. Variations from this program are possible, but only with approval of one of the area advisers (Room 207 or 208, Communications Lab.).

Physics 411—General Physics	5 hours
Physics 412—General Physics	
or	
Physics 413—General Physics	5 hours
Chemistry 411, 412—General Chemistry	10 hours
Botany 401, 402—General Botany	
Zoology 401, 402—General Zoology	15 hours
Geology 451—Introduction to Geology	5 hours
Total Minimum Requirement	40 hours

Required Education Courses

Education 684—The Teaching of General and Physical Science

or

Education 680—Science Materials for Junior and Senior High Schools

or

Education 681—Laboratory Practicum for Teachers of Science 3 hours

Courses included in the Comprehensive Science Minor may not be counted toward a second minor in science for the purpose of meeting the College curriculum requirements. Such courses may be used, however, in meeting the requirements for certification in elective minors in the respective science fields.

ENGLISH—MAJOR TEACHING FIELD

A student wishing to major in English must receive the permission of an authorized adviser in the area of English in the College of Education prior to declaring that major.

1. All students in the College of Education offering English as one of their teaching fields shall pursue as a minimum the following courses in English in approximately the order in which they are here listed: 416, 417, 418; 505 or

643; 563, 564; 550 or 676; 609, 641, 642—minimum 40 hours. The foregoing courses, while constituting a minimum for major certification in English, should be augmented, in every case in which the student's total program will permit, by additional elections from the following courses: Education 663, 669; English 625, 670, 674; Speech 501.

2. Since acquaintance with numerous related areas of scholarship will enable the teacher of English to make his work increasingly meaningful and rich, it is recommended that English majors elect as many of the following courses as their programs will permit: Fine Arts 501, 502, 503; Music 404, 405; Philosophy 401, 402, 405, 516; History 421, 422, 423, 517; Political Science 401, 509; Sociology 401, 402, 407; Journalism 602, 622; Psychology 683; Education 503, 601, 602, 645.

3. At least twenty hours in the English courses listed in paragraph 1 shall have been completed prior to the student's election of Education 671 and thirty hours prior to the election of Education 670, the required methods (professionalized subject-matter) courses for prospective English teachers.

4. Both Education 670 and 671 are required of all students completing a major teaching field in English. Both Education 670 and 671 are prerequisite to supervised student teaching in English (Education 536N). One of these courses *must* be elected preceding student teaching; however, the other course may be carried concurrently with Education 536N. While Education 670 and 671 are given during the Summer Quarter, they are not open at that time to graduate students lacking teaching experience.

ENGLISH—MINOR TEACHING FIELD

A student wishing to minor in English should obtain the permission of an authorized adviser in the area of English in the College of Education prior to declaring that minor.

Minimum requirement: 36 credit hours in English and five credit hours in English-teaching methods, as specified below.

Courses required: English 416, 417, 418, 563, 564, 510, 511, 550, 505 (or 507 or 643 with permission of the Education adviser), 641 (or 642 or 609), Education 671 or 670, this choice to be made after conferring with Professor Seely.

Additional courses suggested: Education 663, 669; English 642 (if not carried as a part of the minor), 625, 670, 674, 610, 615, 620, 677; Speech 501. See also the recommended courses in other subject-matter areas listed in the second paragraph concerning English Majors.

The area adviser or the Secretary of the College is authorized to approve such modifications of the foregoing program as may be justified by the student's total background in natural science.

GEOGRAPHY—MAJOR TEACHING FIELD

1. All students offering geography as a teaching field should pursue a minimum of 35 hours of course work elected in approximately the following order:

FIRST YEAR: Geography 401, 403

SECOND YEAR: Geography 505

THIRD AND FOURTH YEARS:

Group I: Geography 605, 621, 624, 625, 626, 627 (two courses)

Group II: Geography 603, 604, 651, 712 (two courses)

Group III: Geography 631, 633, 634 (one course)

Group IV: Geography 510, 611, 615, 700, Physics 420 (one course)

The remaining four or six credits may be made up by election of two additional courses from the offerings of the Department of Geography or from the following courses in the Department of Geology: 601, 610, 611.

2. The student preparing to teach physical geography should elect Physics 420 (Meteorology), Geography 615 (Climatology) or Geology 601 (Physiography), which may be substituted for the one course required in Group III. Also Geology 610 (Physiography of the Eastern United States) or Geology 611 (Physiography of the Western United States) may be offered in place of one of the courses required in Group I or Group II.

3. Geography may be combined with history, political science, economics, and sociology as a component of the general social studies field of teaching (see below).

GEOGRAPHY—MINOR TEACHING FIELD

Minimum requirement: 23 Quarter-credit hours.

Courses required:

FIRST YEAR: Geography 401, 403	10 hours
SECOND YEAR: Geography 505	3 hours
THIRD AND FOURTH YEARS: One course from each of the following four groups:	
Group I: Geography 621, 624, 625, 626, 627	
Group II: Geography 604, 651, 712	
Group III: Geography 631, 633	
Group IV: Geography 510, 611, 615	12 hours
Total	25 hours

Geography courses should be elected in approximately the order named above. On the recommendation of the student's adviser in the social studies area or the Chairman of the Department of Geography, substitutions may be permitted if a sound educational reason is offered.

THE SOCIAL STUDIES—MAJOR TEACHING FIELD

For this major teaching field a minimum total of eighty Quarter hours in social studies subjects is required. This "double-major program," together with a minor teaching field as explained in this section, will be accepted as fulfillment of the requirement in the teaching fields. Graduates who have completed the program will be recommended for certification not only as teachers of history, but also as teachers of any other social studies courses offered in the secondary schools of Ohio. The subject requirements are as follows:

Either: History 421-422-423, and 12 hours of Advanced History (i.e. Number 500 or above)	27 hours
Or: History 401-402, 403-404, and 7 additional hours	27 hours
Economics 406	5 hours
Geography 401, 403	10 hours
Political Science 401, and either 509 or 510	10 hours
Sociology 401	5 hours
Recommended: International Studies 410	2 hours
Advanced courses (i.e. number 500 or above) in the social studies	23 hours
Total	109 hours
Education 677 (must precede student teaching)	5 hours
Education 678	3 hours

In addition to the 2.25 point-hour ratio for the major as a whole, a point-hour ratio of 2.0 in each of the separate subject-matter areas included in the foregoing list is required for admission to student teaching.

Since the 80-hour program in Social Studies is approximately equivalent to two ordinary majors, the student electing this program is not required to complete a minor in another subject.

HISTORY AND GOVERNMENT—MAJOR TEACHING FIELD**Required Courses**

Either: History 421, 422, 423, and 5 hours of Advanced History (i.e. Numbered 500 or above)	
Or: History 401, 402, 403, 404 (or equivalent)	20 hours
Political Science 401, and either 509 or 510	10 hours
Advanced course in History and Political Science	15 hours
<hr/>	
Total	45 hours
Education 677	5 hours
Education 678	3 hours

JOURNALISM—MINOR TEACHING FIELD

Minimum Requirement: 25 Quarter-credit hours.

Courses required:

Journalism 401—Introduction to Journalism	2 hours
Journalism 402—Elementary Reporting	4 hours
Journalism 403—Advanced Reporting	5 hours
Journalism 501—Copyreading	4 hours
Journalism 519—Newspaper Typography and Printing	4 hours
*Two courses from "600" level in Journalism	6-8 hours
Total	25-27 hours

* When Education 674, the Supervision of Journalism in Secondary Schools is available, this course together with one other course in Journalism at the "600" level should be taken to meet this requirement.

LATIN—MAJOR TEACHING FIELD

The teaching field in Latin is based on three or four years of high school preparation and requires a minimum of 41 Quarter hours of college credit in Latin courses as outlined in the list below. Students who elect more than one course in a given Quarter should distribute their courses among the three types of work: reading courses, lecture courses, and professional work.

Students with two years of high school Latin should elect Latin 404; on completion of this course, such students may take Latin 405 or, with departmental approval, may take one of the series 406, 407 or 408 and thereafter return to the normal sequence.

All students bringing high school credits in Latin must take the placement test, which is offered at the beginning of each Quarter.

FIRST YEAR: Latin 406 (5), 407 (5), 408 (5)

SECOND YEAR: Latin 502 (3), 501 (8), and 605 (3), 503 (3)

THIRD YEAR: Latin 507 or 608 (3), 612 (3), 616 (3)

FOURTH YEAR: Latin 617 (8), 615 (8)

Alternate courses in third or fourth year with approval or adviser:

Latin 631 (1 to 6), 650 (3); History 656 (3). If possible, both Latin 507 and 608 and all of the alternate courses should be added.

Professional: Third year, Spring—Education 694 (3), methods;

Fourth year, Autumn or Spring—Education 536 (7), student teaching.

NOTE: Of particular importance to teachers are Latin 505, 507, 608, 612, 615, 616, 617.

LATIN—MINOR TEACHING FIELD

Courses required: Latin 404, 405 (with departmental approval a more advanced course may be substituted for Latin 405); two courses chosen from Latin 406, 407, 408 and 505; and in addition Education 694 (3 hours).

Students will be admitted to Education 694 with 26 hours collegiate Latin beyond the equivalent of two high school units, or with 23 hours of such credit with a "B" average.

SCHOOL LIBRARY SCIENCE—MINOR TEACHING FIELD*Minimum requirement: 24 Quarter-credit hours.**Courses required:*

Education 503—Organization and Administration of the School Library	3 hours
Education 521—Children's Literature	3 hours
Education 550—Library Materials for the Secondary School	3 hours
Education 551—Classifying and Cataloging the School Library	2 hours
Education 552—Practice Library Work	5 hours
Education 646—Enriching Curriculum Units through the Use of the Library	3 hours
Education 647—Reference Work in the School Library	3 hours
Education 648—Library Guidance for the Adolescent Reader	3 hours
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	25 hours

Persons completing the foregoing minor will be eligible to have this minor included on the provisional high school teacher's certificate, thus being eligible for service as a teacher-librarian.

MATHEMATICS—MAJOR TEACHING FIELD**Required Courses**

Mathematics 416—First Year College Mathematics	5 hours
Mathematics 417—First Year College Mathematics	5 hours
Mathematics 418—First Year College Mathematics	5 hours
Mathematics 436—Calculus	5 hours
Mathematics 545—Application of Mathematics	5 hours
Mathematics 621—Advanced Geometry	5 hours
Mathematics 631—History of Mathematics	4 hours
Mathematics 651—Fundamental Ideas in Algebra and Geometry	3 hours
Mathematics 652—Fundamental Ideas in Algebra and Geometry	3 hours
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Total Mathematics	40 hours
Education 659 and Education 660—The Teaching of Mathematics in Secondary Schools	6 hours
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Total Requirements	46 hours

Recommended Courses

Education 689—Field and Laboratory Work for Teachers of Mathematics	3 hours
Education 761—Materials for Teaching Secondary School Mathematics	3 hours
Education 762—The Teaching of Algebraic Concepts	4 hours

MATHEMATICS—MINOR TEACHING FIELD*Minimum requirement: 29 Quarter-credit hours.***Required Courses**

Mathematics 416—First Year College Mathematics	5 hours
Mathematics 417—First Year College Mathematics	5 hours
Mathematics 418—First Year College Mathematics	5 hours
Mathematics 536—Calculus	5 hours
Mathematics 545—Applications of Mathematics	5 hours
Mathematics 631—History of Mathematics	4 hours
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Total Mathematics	29 hours
Education 659 and 660—The Teaching of Mathematics in Secondary Schools	6 hours
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Total Requirement	35 hours

MODERN FOREIGN LANGUAGE—MAJOR TEACHING FIELD

Competencies Required

First Stage. A mastery of: (a) reading; (b) aural comprehension; (c) pronunciation; (d) functional grammar; (e) written composition; (f) oral composition; to the point where the student is able to read ordinary French, Spanish, or German literature, to understand simple speech; and to express simple ideas in writing or speech.

Second Stage: A mastery of: (a) the principles of phonetics and an accurate pronunciation; (b) oral classroom composition and conversation; (c) functional grammar, syntax, and written composition; (d) French, Spanish, or German culture and civilization sufficient to enable the prospective teacher to achieve the objects of the teaching of modern languages in the high school.

A knowledge of the history of the literature, of the economic, political, social and intellectual life, of the painting, sculpture, and architecture of the people whose language is being studied, may be acquired either in courses or by private study. (Courses available in allied departments suitable for these needs are: *French*: History 625; *German*: History 629; *Spanish*: History 645-646, Fine Arts 564, 674, 675).

Third Stage. A mastery of the objectives, principles, techniques, and practices of teaching the subject concerned sufficient for the student to teach with reasonable efficiency in the high school upon graduation.

Courses Required

First Stage. Students who have not had two years of high school preparation sufficient to pass the Placement Tests (see German, page 186), French and Spanish, page 267) will take courses 401 and 402, respectively, to satisfy this deficiency. Students whose preparation or whose Placement Test score attests a standing more advanced than the equivalent of 402 will receive appropriate credit to apply on major requirements and will start on the next course in the sequence below.

French or Spanish: 403 (5); 404 (5); 410 (5); 517 (5)—20 hours.

German: 403 (5); 404 (5); 507 (5); five hours chosen from 575 (5), 576 (5); or 577 (5). 416-417-418 will be accepted as equivalent to 401-404, inclusive—20 hours.

Second Stage: (The courses below need not be taken in the order listed).

French: 521 (2); 522 (2); 518 (2); 628 (5); 632 (5); and a minimum of five hours of "600" literature courses. French 627 (3) may replace 632; 628a (3) may replace 628. French 619 (3), 635 (3), 636 (3), 637 (2), 638 (3) and 639 (3) are recommended as extra credit for majors—Minimum total, 21 hours.

Spanish: 521 (2); 522 (2); 518 (2); 617 (5); 620 (5); and a minimum of five hours of "600" literature courses. Spanish 621 (3) may replace 620. Spanish 530 (5), 605 (3) and 623 (3) are recommended as extra credits for majors—Minimum total, 21 hours.

German: 500 (3); 691 (2); 685 (3); 656 (3); 617 (3); and a minimum of 9 hours of literature courses (see German, page 181) German 656 is offered in alternate years and will be taken therefore either in the junior or senior year—23 hours.

Minimum total requirement (beyond 402) French or Spanish—41 hours; German—43 hours.

Third Stage. Professional Courses.

French or Spanish: Education 629A (5);* offered Autumn and alternate Summers.

German: Education 690 (3), offered one Quarter only in alternate years; should be taken concurrently with German 691.

Student Teaching: Education 536 (8, 12 or 15)† offered Autumn and Spring.

Recommended Electives: Education 691 (3); Education 692B (2); Speech 585 (3) (prerequisite waived for foreign language majors).

Minimum Total Professional Requirement: French or Spanish—13 hours; German—11 hours.

* Students majoring in French and Spanish may enroll again in Education 692 for 2 hours credit, preferably concurrent with student teaching. See page 148 for description of Education 692.

† Student teaching in one subject earns 8 hours credit; in a second subject earns 4 additional hours; full time cadet teaching earns a total of 12 hours.

FRENCH—MINOR TEACHING FIELD

Prerequisite: Two high school units.

Minimum requirement: 31 Quarter credit hours.

Courses required: French 403, 404, 410, 517, 518, 521, 522, 628—Total 31 hours.

In addition, Education 692, 5 hours, is required unless the student has credit for another course in methods of teaching a modern foreign language. Prerequisite for Education 692 is 28 hours collegiate French beyond 402, or 23 hours beyond 402 with a "B" average.

GERMAN—MINOR TEACHING FIELD

Prerequisite: Two high school units.

Minimum requirement: 30 Quarter-credit hours.

Courses required: German 403, 404, 500, 507, 691 and 10 hours chosen from 575, 576, or 577—Total 30 hours.

In addition, Education 690, Teaching of German (3 hours) is required unless the student has credit for another course in methods of teaching a modern foreign language. Students will be admitted to Education 690 with 28 hours of collegiate credit in German beyond 402 or with 23 hours with a "B" average, in German beyond 402.

SPANISH—MINOR TEACHING FIELD

Prerequisite: Two high school units.

Minimum requirement: 31 Quarter credit hours.

Courses required: Spanish 403, 404, 410, 517, 518, 521, 522, 617—Total 31 hours.

In addition, Education 692, 5 hours, is required unless the student has credit for another course in methods of teaching a modern foreign language. Prerequisite for Education 692 is 28 hours collegiate Spanish beyond 402, or 23 hours beyond 402 with a "B" average.

PHYSICS—MAJOR TEACHING FIELD**Required Physics Courses**

Physics 411, 412, 413—General Physics	15 hours
Physics 616 -b, -c, -d —Advanced Physics Laboratory	6 hours
Courses chosen from Physics 420, 501, 502, 503, 603, 605, 606, 610, 615, 616, 628, 645, or any 700 course	15-19 hours
Minimum Total Requirement	36-40 hours

Required Education Courses

Education 684—The Teaching of General and Physical Science	3 hours
Education 681—Laboratory Practicum for Teachers of Science	2-5 hours

Recommended Courses

Education 680—Science Materials for Junior and Senior High Schools	3 hours
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The "600" courses in Physics involve as prerequisites freshman mathematics and two or three Quarters of calculus, a total of 25 or 30 hours. By adding 10 Quarter hours (Mathematics 621 and an additional course, approved by student's adviser) the student may meet the minimum requirement for an acceptable major field of specialization in mathematics.

PHYSICS—MINOR TEACHING FIELD**Required Courses**

Physics 411, 412, 413—General Physics	15 hours
Physics 616, -b, -c, -d, -e, Advanced Physical Laboratory	3-6 hours
Astronomy 500—Descriptive Astronomy or	
Astronomy 401—General Astronomy I or	
Physics 420—Descriptive Meteorology or	
Physics 501—Geometrical Optics or	
Physics 645—Acoustics for Students of Music and Speech	10 hours
Total Minimum Requirement	30 hours

Required Education Courses

Education 684—The Teaching of General and Physical Science, or with approval of adviser, either	
Education 680—Science Materials for Junior and Senior High Schools or	
Education 681—Laboratory Practicum for Teachers of Science	3 hours

PSYCHOLOGY AND GUIDANCE—MAJOR OR MINOR FIELD

The major and minor in psychology and guidance have been designed for those students who wish to learn more about psychology as a means of improving their competence as classroom teachers. Courses in measurement, child development, and learning have been provided as a means of acquainting prospective teachers with the application of these subjects to their teaching fields.

The major and minor are further designed for those students who are interested in eventually entering the professional fields of school psychology or guidance or who wish to prepare themselves to do graduate work in the field of psychology.

Any one who desires to be employed in Ohio public schools for professional psychological and guidance work (school psychologist, guidance counselor) is required to hold a valid teaching certificate and have at least one year of teaching experience. To qualify as school psychologist also requires the master's degree. Copies of the program as set up by the Departments of Psychology and Education, leading to the master's degree in this area may be obtained in Rooms 120, 321, 325, Arps Hall. A committee is responsible for selecting and advising students on this program. A major or minor in psychology and guidance should be the undergraduate basis for this degree.

Students interested in a major in psychology and guidance must have a general cumulative point-hour ratio of 2.50 when they apply. Other evidences of potential ability may be considered by the departmental supervisor. A student making such election should consult with personnel in the Department of Psychology, Department of Education, and Bureau of Special and Adult Education for the purpose of planning his program. This should be done not later than the beginning of the junior year. Students wishing to apply for a major or minor should arrange for an initial interview with Dr. John E. Horrocks, 407 Arps Hall.

Students who wish to enroll in Education 537 for supervised practice in school psychological work must have had Psychology 695 or 781 and obtain permission of the department supervisor.

Students who desire to qualify as school psychologists or guidance counselors may pattern their undergraduate work either through the secondary academic curriculum or through the curriculum in elementary education. Those who select the secondary curriculum and elect a major in psychology must choose a second major in a high school teaching field, rather than two minors to complete the teaching field requirements. (Page 41, II, of the *College of Education Bulletin*). Those students who choose to follow the elementary education curriculum should select psychology courses from those listed under Psychology and Guidance-Major Field for their twenty hours of directed electives. These courses, together with other required psychology courses in the elementary education curriculum, provide an adequate undergraduate basis for graduate work in the area of psychology and guidance.

I. PSYCHOLOGY AND GUIDANCE—MAJOR FIELD

Secondary Academic Curriculum

The major shall consist of 40 Quarter hours in addition to Psychology 401 and Psychology 407 which are required as part of the professional sequence of all College of Education registrants.

Of the 40 hours required 25 are stipulated as indicated in Table I, 9 must be elected from the list given in Table II, and the remaining 6 are free electives to be chosen from the list of electives or from other courses in psychology and/or guidance.

TABLE I
Required Courses

Education 750	3 hours
Psychology 610	3 hours
Psychology 663	5 hours
Psychology 684 or 659	3 hours
Psychology 613	3 hours
Psychology 628	3 hours
Psychology 608 or 508	4-5 hours

25 hours

TABLE II

Recommended Electives

Psychology 609	3 hours
Psychology 689	3 hours
Psychology 683	3 hours
Psychology 521	3 hours
Psychology 601	3 hours
Psychology 615	3 hours
Psychology 671	3 hours
Psychology 678	3 hours
Psychology 713	2 hours
Psychology 690	3 hours
Psychology 675	3 hours
Sociology 600	4 hours
Economics 510	5 hours

II. PSYCHOLOGY AND GUIDANCE—MINOR FIELD

Secondary Academic Curriculum

Psychology 401, 407	10 hours
For the balance of the minor, consult the department adviser for an adequate program to be selected from the required and elective courses listed under I above	15 hours
	25 hours

III. PSYCHOLOGY AND GUIDANCE—

Elementary Education Curriculum

Psychology 401, 407	10 hours
Three hours from among the following courses:	
Psychology 609, 610, 613, 663, 683, and 690	3 hours
Twenty hours of directed electives chosen from the courses indicated in I. above	20 hours
	33 hours

The following statements present the scope of service and certification requirements for guidance counselors and school psychologists in public schools in Ohio. These statements are quoted from the 1950 edition of *Laws and Regulations Governing the Certification of Teachers*, issued by the State Department of Education.

GUIDANCE COUNSELING

I. Scope of Service:

The following duties are construed as functions of guidance counseling:

- Counseling with pupils on curricular, extra-curricular, social-adjustment, occupational-adjustment and placement problems;
- Conference with teachers, parents, social workers, representatives of community agencies and other specialists on educational, health, personal, social, occupational and placement problems of pupils, to coordinate all activities relative to the needs of the individual student;
- Class instruction in educational and occupational information and planning, and related subjects;
- Preparation and maintenance of adequate records of pupils for counseling purposes; and
- Collection and maintenance of current reliable information about available educational and occupational opportunities.

II. Provisional Certificates:

A four-year provisional certificate valid for performing those duties defined above will be issued upon evidence of the following:

- Age: Not less than 25 years of age.
- Certification: Possession of a certificate valid for teaching in the schools of Ohio.
- Experience: (Three years)—(A) One year of experience in teaching. (B) One year of gainful employment in fields other than teaching, such as commerce, business, industry, personnel work, social case work, counseling and interviewing, or a combination of the same. (C) One additional year of experience in (A) or (B). (D) upon the recommendation of an institution approved for offering instruction in guidance counseling, equivalent experience in field work, internship in counseling, social case work and similar experience may be offered in lieu of the one year gainful employment requirement.

III. Eight-Year Professional Certificate:

The eight-year professional certificate in guidance counseling will be issued upon evidence of:

1. Three years of successful experience in guidance counseling, under the four-year provisional special certificate; and
2. Evidence of a master's degree with the major in guidance counseling, conferred by an approved institution. (Thirty semesters hours of graduate credit in a purposeful pattern pertinent to the training of a guidance counselor, may be submitted in lieu of the master's degree.)

IV. Permanent Certificate:

The eight-year professional certificate will be made permanent upon evidence of forty months of successful experience in guidance counseling under the eight-year certificate.

SCHOOL PSYCHOLOGISTS**I. Scope of Service:**

The following duties are construed as coming within the scope of service of the School Psychologist:

- A. Diagnosis of abilities, aptitudes, interests, and personalities;
- B. Guidance in pupil self-correction;
- C. Counseling with teachers, personnel workers, parents, and administrators on problems of promotion, transfer, remedial instruction personal adjustment, behavior, etc.;
- D. Teaching of the several pertinent aspects of psychology.

II. Provisional Certificates:

A four-year provisional special certificate as School Psychologist, valid for performing the duties defined above, will be granted upon evidence of the following:

- A. Master's degree in Psychology conferred by an institution approved by the Department of Education for the preparation of school psychologists.
- B. Possession of qualifications for a teaching certificate in Ohio and evidence of one year of experience as an elementary or secondary teacher.

III. The Eight-Year Professional Certificate as School Psychologist will be issued upon evidence of twenty-four months of successful experience as a School Psychologist, or equivalent experience, under the above four-year provisional certificate.

IV. The Permanent Certificate as School Psychologist will be issued upon evidence of forty months of successful experience under the eight-year certificate.

SPECIAL EDUCATION—MINOR TEACHING FIELD TEACHING SLOW-LEARNING CHILDREN

Minimum requirement: 23 Quarter-credit hours from courses listed on page 116.

This minor in Special Education is designed to prepare for teaching slow-learning children in secondary schools. Upon completion of this minor, the regular secondary certificate will be validated for teaching slow-learning secondary school children. The student's program in the minor must be approved by an adviser in the Bureau of Special and Adult Education. See also pages 116 to 118 of this bulletin.

SPEECH—MAJOR TEACHING FIELD

Since from the point of view of public school needs in Ohio, the most practical major is a non-specialized major in the field of general speech, the following courses are required:

Speech 416 (2), 501 (3), 504 (3), 508 (2), 509 or 417 (2), 560 (3), 521 (3), 541 or 506 (3), 505 or 470 (5), 522 or 430 (3), 545 (3), 694 (3), 402 (5), 580 (3)—Total, 43 hours.

The preceding courses may be augmented whenever the student's program will permit, as follows:

1. When the second major is English, additional courses in dramatics and interpretation will be found helpful.
2. When the second major is History, additional courses in public speaking and debate are recommended.

3. When the second major is Psychology, additional courses in speech re-education are advisable.

Education 627 and 628 are required of all students completing a major teaching field in speech and should be taken during the Quarter immediately preceding that in which Education 536 (Supervised Student Teaching) is scheduled. A minimum of 20 Quarter hours in speech or special permission of the instructor is prerequisite for admission to Education 627, 628.

SPEECH—MINOR TEACHING FIELD

Students in the College of Education who wish to offer speech as a minor teaching field must first secure the written approval of the speech adviser of the College indicating that they possess adequate speaking voice and satisfactory speech habits.

A minor in Speech, with a minimum of 27 Quarter-credit hours, in addition to Education 627 and 628, is arranged to meet individual needs. Such a minor is used primarily to strengthen the major teaching field, and is limited, as a teaching minor in Speech, to that division of the speech field in which course work is taken. (Public address and discussion; Dramatics and interpretations).

Required courses, no matter what the major field of specialization may be, are as follows: Speech 416 (2), or 417 (2), 501 (3) or equivalent, 504 (3), 508 (2)—12 hours. The remaining fifteen hours will be determined in conference with the adviser, and the agreed upon courses leading to certification will be filed in the college office.

Students interested in taking courses in the area of speech therapy may do so, but should realize that such emphasis does not lead to a teaching minor but serves rather as an adequate background for work in this field on the graduate level.

SPECIAL CURRICULA

BUSINESS EDUCATION CURRICULUM

Students who are preparing for the teaching and supervision of business subjects should register in the College of Education. Those who expect to engage in business should register in the College of Commerce and Administration.

Students interested in qualifying for degrees in both commerce and education should consult the statement on page 37.

This curriculum provides a minimum preparation for the teaching of all phases of business education in secondary schools. It meets the requirements for the teacher's certificate in business education (State Department of Education Comprehensive Major). This certificate is valid for teaching bookkeeping, business economics, business English, business law, business organization and management, clerical practice, general business, merchandising, retail store selling, salesmanship, secretarial practice, stenography, and typing.

Students desiring to be certified to teach all business subject *with the exception of stenography* may substitute for the following required courses in the business education curriculum, Business Organization 510, 516, Education 404, 405, 406, 471, 472, 473, 542, one of two options.

Option 1. A minor in a non-business education area which is approved by the student's adviser and the Secretary of the College of Education.

Option 2. The following courses in Accounting, Business Organization, and Economics: Accounting 403, 616, Business Organization 676, 686, and Economics 520, 624, 509. Students electing this option must substitute Economics 401 and 402 for Economics 406 in the required curriculum.

FIRST YEAR

English	(416) 3	English	(417) 3	English	(418) 3
Geography	(401) 5	Geography	(403) 5	Psychology	(401) 5
Education	(408) 3	*Science or Mathematics	5	*Science or Mathematics	5
Business Organization	(401) 5	Physical Education	1	Physical Education	1
Physical Education	1	Military or or Air Science	2	Military or or Air Science	2
Physical Education	(400) 1	Elective	3	Elective	5
Military or Air Science	2				

SECOND YEAR

Psychology	(407) 5	Accounting	(401) 5	Accounting	(402) 5
† Education	(401) 0	† Education	(402) 0	† Education	(403) 0
† Education	(404) 2	† Education	(405) 2	† Education	(406) 2
Economics	(406) 5	Sociology	(401) 5	Education	(534) 4
† Education	(505) 3	Physical Education	1	Physical Education	1
Physical Education	1	(Women)		(Women)	
(Women)		Military or or Air Science	2	Military or or Air Science	2
Military or or Air Science	2	Education	(533) 4		

THIRD YEAR

Education	(471) 4	Education	(472) 4	Education	(473) 4
Business Organization	(510) 5	Business Organization	(516) 3	Business Organization	(712) 2
Business Organization	(700) 5	Business Organization	(504) 3	Business Organization	(625) 3
Physical Education	(610) 3	Business Organization	(621) 3	Economics	(522) 4
		Elective	3	Elective	4

FOURTH YEAR

Education	(542) 3	Business Organization	(705) 4	Education	(607) 3
Education	(536J) 3	Business Organization	(716) 4	Business Organization	(513) 3
Education	(543) 3	Education	(780) 3	Education	(632 or 636) 4
		Elective	3	Elective	4

* Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy; General Studies 431, 432; Geology 451 and Sociology 502 or other appropriate five-hour course; or two five-hour courses in Mathematics.

† Nine hours of the total number of electives must be chosen from one or more of the four fields—Fine Arts, Music, Philosophy, and Religion—and selected from the approved list of courses on page 46 to 48.

‡ Students who have had some preparation in shorthand and typing will be given competency tests on the first class day of Education 401 and Education 404 at the beginning of the second year to determine what of these course requirements they have to meet for admission to Education 471. Examinations will be repeated on the first day of Education 402, 403, 405, and 406.

§ This course is not required, but it is recommended to students in Business Education as a means of obtaining field experience.

¶ While the minimum requirement of the State Department of Education is met by ten hours of Accounting, students who have any expectation of teaching this subject should make further elections of courses in this field.

|| Education 602, Audio-Visual Materials of Instruction, recommended.

NOTE: As in all curricula, eligibility for admission to student teaching requires a minimum point-hour average of 2.25 in the required professional courses and a minimum point-hour average of 2.25 in the major. For the purpose of computing this point-hour ratio, the following courses are considered as constituting the major: all courses in accounting, business organization, economics, and geography: Education 404, 405, 406, 471, 473.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

BUSINESS EDUCATION—MINOR TEACHING FIELDS

Students pursuing the General Curriculum for high school teachers of academic subjects or a special curriculum other than the Business Education curriculum may qualify to teach in limited areas of business education by completing one or more of the following minors:

(a) *Stenography-Typing*

This field is valid for teaching shorthand, typing, business English, clerical practice, and secretarial practice.

Minimum requirement: 37 Quarter-credit hours.

Courses required: Education 401, 402, 403, 404, 405, 406, 471, 472, 473, 542; Economics 406; Business Organization 504, 510, 516.

(b) *Bookkeeping-Basic Business*

This field is valid for teaching basic business, bookkeeping, business law, economic geography, business economics, and business organization and management.

Minimum requirement: 36 Quarter-credit hours.

Courses required: Economics 406; Accounting 401, 402; Business Organization 401, 621; Geography 401, 403; Education 543.

(c) *Salesmanship-Merchandising*

This field is valid for teaching merchandising, retail store selling, salesmanship, advertising, and economic geography.

Minimum requirement: 29 Quarter-credit hours.

Courses required: Economics 406; Business Organization 700, 713, 716; Geography 401, 403; Education 780.

(d) *Bookkeeping*

This field is valid for teaching bookkeeping only.

Minimum requirement: 23 Quarter-credit hours.

Courses required: Economics 406; Accounting 401, 402, 403; Education 543.

(e) *Typewriting*

This field is valid for teaching typewriting only.

Courses required: Education 401, 402, 403; methods of teaching typewriting.

The minors in Bookkeeping and Typewriting respectively will be accepted as elective minors for purposes of certification in single subject areas but not as meeting curriculum requirements for graduation.

Students interested in electing one of the foregoing minors should consult with an adviser in business education, Room 223, Journalism Building, or with a consultant in Arps Hall, Room 106 or 107.

DISTRIBUTIVE EDUCATION CURRICULUM

This curriculum provides a minimum preparation in technical and professional subjects for a teacher-coordinator of distributive education in secondary schools. The State Department of Education requires certain work experience in a distributive occupation which must be met prior to employment and certification in Ohio. A partial amount of the work experience may be secured during the junior or senior years by enrolling in Business Organization 725. A four-year provisional teachers' certificate will be issued by the State Department of Education to persons completing the requirements of the Distributive Education Curriculum at this University.

Students interested in teaching positions in this field should consult the Teacher Trainer of Distributive Education, College Road Annex. The student should then register in the College of Education.

Students interested in qualifying for degrees in both commerce and education should consult the statement on page 37.

FIRST YEAR

Education	(408)	3	English	(417)	3	English	(418)	3
English	(416)	3	Psychology	(401)	5	Psychology	(407)	5
Business Organization	(401)	5	†Science		5	†Science		5
Physical Education	(400)	1	Physical Education		1	Physical Education		1
Physical Education		1	Military or Air Science		2	Military or Air Science		2
Military or Air Science		2	Elective		3	Elective		3
*Elective		5						

* Ten hours of electives must be chosen from the fields of history, political science, philosophy, foreign languages, or English.

† Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, General Studies 431, 432; Geology 451 and Sociology 502 or appropriate five-hour course.

SECOND YEAR

Fine Arts (421)	5	Education (533)	4	Education (584)	4
Economics (406)	5	Accounting (401)	5	Accounting (402)	5
Physical Education (Women)	1	Physical Education (Women)	1	Sociology (410)	5
Military or Air Science	2	Military or Air Science	2	Physical Education (Women)	1
Elective	5	Elective	6	Military or Air Science	2

THIRD YEAR

Business Organization (504)	3	Business Organization (621)	3	Business Organization (706)	4
Business Organization (700)	5	Business Organization (676)	5	Business Organization (718)	2
Geography (503)	3	Economics (522)	4	Home Economics (401)	3
Physical Education (610)	3	Elective	3	Elective	7
Elective	3				

FOURTH YEAR

Education (536K)	7	Education (632 or 636)	4	Education (607)	3
Education (782)	3	Fine Arts (431)	5	Business Organization (688)	3
Business Organization (705)	4	Education (780)	3	Business Organization (716)	4
Elective	2	Education (781)	3	Electives	6

NOTE: As in all curricula, eligibility for admission to student teaching requires a minimum point-hour ratio of 2.25 in the major. For the purpose of computing this point-hour ratio the following courses are considered as constituting the major: All required courses in accounting, business organization, home economics, fine arts, and Economics 522 and Geography 503.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

DENTAL HYGIENE-EDUCATION CURRICULUM

Dental Hygienists are now being employed to serve on the health staffs in many of the better-organized school systems. The work of the dental hygienist include dental and oral examination of pupils, technical service, and instruction concerning the principles of dental hygiene. The Dental Hygiene-Education Curriculum, offered jointly by the College of Education and the College of Dentistry provides young women with technical preparation in dental hygiene combined with professional understanding of work in the schools. It leads to the degree Bachelor of Science in Education.

The State Department of Education has approved the curriculum in dental hygiene and will grant dental hygiene graduates a special certificate entitling them to be employed in public schools.

ADMISSION AND REGISTRATION

During the first year of the curriculum, the student is registered only in the College of Education; during the second, third, and fourth years, she is registered jointly in the College of Education and the College of Dentistry. Transfer, effective at the beginning of the second year, is made early in the third Quarter of the freshman year. Application is filed for admission to the curriculum in dental hygiene and for transfer to joint registration in the two colleges at the University Examiner's Office. Selections are made by the University Examiner and a committee of the College of Dentistry on the basis of professional qualifications, as evidenced by course work, and personal qualification. Applicants must have a personal interview with the supervisor of Dental Hygiene. For further specific information concerning the dental hygiene technical program inquiries should be made of the Division of Dental Hygiene, Room 337, Dentistry Building.

FIRST YEAR

Education (408)	3	English (417)	3	English (418)	3
English (416)	3	Psychology (401)	5	Psychology (407)	5
Zoology (416)	5	Zoology (402)	5	Physical Education (423)	1
Home Economics (440)	5	Physical Education (422)	1	Speech (401)	5
Physical Education	1			Physical Education (410)	5

At the close of the third Quarter of the first year, students should meet the requirements for admission into the Division of Dental Hygiene, College of Dentistry.

SECOND YEAR

Home Economics (561) 3	Anatomy (504) 5	Economics (406) 5
Bacteriology (509) 5	English (510, 540, 50) 5	Psychology (408) 3-5
Dental Hygiene (401) 3	563, 564 5	or Elective
Dental Anatomy	Sociology (401) 1	Dental Hygiene:
Physical Education (425) 1	Physical Education (426) 1	Dental Anatomy (402) 2
Elective 3		Dental Prophylaxis (403) 3
		Oral Hygiene (404) 1
		General Pathology (501) 2
		Oral History (506) 1
		Physical Education (427) 1

THIRD YEAR

Physical Education (682) 3	Social Science	Physical Education (644) 4
Psychology (662) 5	Elective 4	Education (514) 4
Dental Hygiene:	Dental Hygiene:	Dental Hygiene
Materia Medica (405) 1	Dental Nursing (503) 1	Dental Nursing (504) 1
Dental Nursing (502) 1	Dental Materials (505) 3	Dental Prophylaxis (510) 5
Oral Pathology (507) 1	Dental Prophylaxis (509) 6	Oral Hygiene in the (514) 2
Dental Prophylaxis (508) 3	Oral Hygiene in the (518) 2	Schools
Nursing Technique (511) 1	Schools	Office Practice (516) 3
Roentgenology (512) 2		and Economics
Anæsthesia (515) 1		

FOURTH YEAR

Education (502 or 505) 2	Education (537A) 7	*Psychology (690) 3
Field Service special	†Physical Education (645) 3	Education (607) 3
Education (515) 4	or Elective	Elective 6
†Elective 3	Elective 3	

* The student must elect either Psychology 408 or 690. She may elect both.

† Education 602 and Physical Education 645 are recommended electives.

REQUIREMENTS FOR THE DEGREE

Upon the satisfactory completion of all requirements as outlined by the College of Dentistry for the certificate of Graduate Dental Hygienist and upon the satisfactory completion of a total of one-hundred and ninety-six Quarter credit hours under the restriction and requirements described above, the student will be recommended for the degree Bachelor of Science in Education.

REQUIREMENTS OF THE OHIO STATE DENTAL BOARD

In order to practice dental hygiene in the State of Ohio, the graduate of dental hygiene must pass the practical and theoretical examinations given by the Ohio State Dental Board. The time, place, and manner of applying for this examination will be announced to the student during her last Quarter in the division of Dental Hygiene.

FINE ARTS

CURRICULUM LEADING TO THE DEGREE OF
BACHELOR OF SCIENCE IN EDUCATION

NOTE: For curricula leading to the degree Bachelor of Fine Arts see pages 101 and 102.

ART EDUCATION

FIRST YEAR

Psychology (401) 5	Fine Arts (495) 3	Fine Arts (496) 3
Fine Arts (494) 3	The Development of Modern Art	Contemporary Art
Introduction to Art		Fine Arts (500) 5
Fine Arts (421) 5	Fine Arts (423) 5	Basic Art, Painting
Basic Art	Basic Art, Drawing	Fine Arts (460) 2
English (416) 3	Fine Arts (481) 5	Education
Physical Education (400) 1	Basic Art, Design	English (418) 3
Physical Education 1	English (417) 3	Physical Education 1
Military or Air Science 2	Physical Education 1	Military or Air Science 2
	Physical Education 2	*Elective 3

* See footnote on following page.

SECOND YEAR

Fine Arts	(501) 3	Fine Arts	(459) 3	Psychology	(407) 5
Art History		Art Education		Fine Arts	(432) 5
Fine Arts	(561) 5	Orientation		Basic Art, Design	
Sculpture		Fine Arts	(505) 5	Fine Arts	(503) 3
History	(421) 5	Life Drawing		Art History	
Physical Education		Fine Arts	(502) 3	History	(423) 5
(Women)	1	Art History		Physical Education	
Military or Air Science	2	History	(422) 5	(Women)	1
*Elective	3	Physical Education		Military or Air Science	2
		(Women)	1		
		Military or Air Science	2		

THIRD YEAR

Fine Arts	(548) 4	Fine Arts	(549) 2	Elective	6
Art Education		Art Education		Fine Arts	(485) 5
Laboratory		Laboratory		Ceramics	
Education	(532) 4	**Natural Science	5	Fine Arts	(558) 5
Education	(533) 4	Fine Arts	(528) 5	Lettering	
**Natural Science	5	Oil Painting			
		Education	(514) 4		

FOURTH YEAR

Education	(520c) 3	††Fine Arts	5	Elective	3
Fine Arts	(600) 5	Studio		Education	(536c) 3
Art Education		Physical Education	(610) 3	Education	(607) 3
Philosophy	(401) 5	Philosophy	(515) 5		
or					
Philosophy	(405) 5				

* Because of differences—such as Military or Air Science—in the basic requirements for men and women, women students should elect a three- or five-hour course in consultation with their adviser.

‡ Following consultation with adviser, Economics 406 and Sociology 401 may serve as the social science requirement. In this case, election of another five-hour course in a social science field is recommended.

** Natural Science. The student may select any one of the following three choices: (1) two five-hour courses in botany, chemistry, General Studies, geology, physiology (requires sophomore standing), or zoology; (2) Geology 451 and Sociology 502; (3) any five-hour natural science course in combination with Geology 451 or Sociology 502.

†† Students in the Bachelor of Science in Education Curriculum are required to elect a five credit hour advanced studio course from the following: ceramics, design, graphics painting or sculpture, etc.

‡ In connection with registration for the last Quarter of their third year, all students pursuing this curriculum must file with the Coordinator of Student Field Experience, Room 103, Arps Hall, their application for admission to Education 520C and 536C.

|| Registration for Education 520C and 536C includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall.

NOTE: Preparation in a second teaching field is not required in this curriculum. However, because beginning teachers are generally expected to teach more than one subject, it is strongly recommended that the student in this curriculum, with the approval of his departmental adviser, shall achieve preparation in at least one additional teaching field approaching as nearly as possible to the standard training outlined for the teaching fields of the general curriculum or in the special curricula.

NOTE: The sequence of courses in Fine Arts listed by the foregoing curriculum is a suggested sequence only. Students majoring in Fine Arts must secure the approval of the departmental adviser upon each Quarter's schedule before presenting the schedule card at the College Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676).

NOTE: Students who wish to receive both the degree of Bachelor of Fine Arts and the degree of Bachelor of Science in Education must complete the required courses for each degree with credits totaling 245 hours. Permission of the School of Fine and Applied Arts must be secured.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of two hundred Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science Education.

FINE ARTS—MINOR TEACHING FIELD

Minimum requirements: 36 Quarter-credit hours.

Courses recommended: Fine Arts 421, 423, 431, 494, 500, 548, 600.

Elective choice should be made from among the following:

Fine Arts 495, 496, 485, 561

Note: Students who wish to select Art Education as their minor teaching field should consult their Art Education adviser for sequence and election of courses. Room 103, Hayes Hall.

SCHOOL HEALTH EDUCATION

This program is offered by the Department of Physical Education to provide preparation in School Health Education. Students successfully completing this curriculum receive certificates from the State Department of Education in School Health Education. Its purpose is to prepare full time supervisors, coordinators and special teachers of School Health Education.

Students who select School Health Education as a major, must consult with advisers in the Men's and Women's Divisions of the Department of Physical Education.

MEN

FIRST YEAR

Education	(408) 3	English	(417) 2	English	(418) 2
English	(416) 2	Zoology	(401) 5	Anatomy	(504) 5
Psychology	(401) 5	Physical Education	(402 or 412) 1	Psychology	(407) 5
Physical Education	(401 or 411 or 414) 1	Military or Air Science	2	Physical Education	(408 or 418) 1
Military or Air Science	2	Elective	5	Military or Air Science	2
Elective	3				

SECOND YEAR

Chemistry	(407) 5	Chemistry	(408) 5	Bacteriology	(509) 5
Social Science	5	Education	(514) 4	Physical Education	(410) 5
Home Economics	(440) 5	Military or Air Science	2	Education	(515) 4
Military or Air Science	2	Social Science	5	Military or Air Science	2

WOMEN

FIRST YEAR

Education	(408) 3	English	(416) 2	English	(417) 2
Psychology	(401) 5	Psychology	(407) 5	Anatomy	(504) 5
Zoology	(401) 5	Physical Education	(422 or 412) 1	*Social Science	(401) 5
Physical Education	(421 or 411) 1	Physical Education	(478) 1	Physical Education	(428 or 418) 1
		Elective	6	†Elective	5

SECOND YEAR

English	(418) 2	Chemistry	(408) 5	Physical Education	(410) 5
Chemistry	(407) 5	Physical Education	(542) 4	Bacteriology	(509) 5
*Social Science	5	Physical Education	(426 or 415) 1	Home Economics	(440) 5
Physical Education	(541) 3	Elective	5	Physical Education	(427 or 416) 1
Physical Education	(425 or 414) 1				

* Social Science. Sociology 401 and either 402 or 407; Sociology 401 and Anthropology 501; or Sociology 401 and Economics 406. (Sociology 401 and Economics 406 will complete the prerequisites for "600" courses in their subject.)

† At least nine hours of electives must be selected from philosophy, fine and applied arts, and music.

MEN AND WOMEN

†THIRD YEAR

Physical Education	(692) 3	Social Administration	(670) 2	Physical Education	(644) 4
Physiology	(421) 5	Physiology	(422) 5	Physical Education	(621) 5
Education	(583) 4	Education	(584) 4	Physical Education	(630) 5
Psychology	(610) 3	Elective (Professional)	5	Elective (Professional)	3
Psychology	(609) 3				

FOURTH YEAR

Education	(586M) 4	Education	(602) 3	Education	(586M) 4
Education	(667) 3	Physical Education	(645) 3	Education	(607) 3
General Studies	(520) 3	Electives	6	Electives	9
Elective	3			Social Administration	(671) 2
Physical Education	(641) 3				

† In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Coordinator of Student Field Experience, Room 103, Arps Hall, their applications for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

NOTE: All students taking School Health Education as a teaching field or for minimum certification credit must secure the approval of the department adviser upon each Quarter's schedule before presenting the schedule card at the College Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676).

NOTE: In addition to the required basic science courses enough hours must be taken to obtain a 15 hour sequence in one of the following areas: Bacteriology, Zoology, Chemistry or Physiology.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

SCHOOL HEALTH EDUCATION—MINOR TEACHING FIELD

Minimum requirement: 38 Quarter-credit hours. Valid for certification in School Health Education in grade 7-12.

Courses recommended: Non-duplicating courses selected with approval of departmental advisers; minimum Quarter-credit hours are indicated in each group.

Group (a) Human Anatomy and/or Physiology	10 Quarter hours
Group (b) Principles, Administration and Methods of the School Health Education Program: Physical Education 644, 645, 602	10 Quarter hours
Group (c) Personal and Community Hygiene: Physical Education 410, 641 General Studies 520 or Sociology 600	9 Quarter hours
Group (d) Electives Pertinent to the Field: Psychology 609, 610 Education 667 Social Administration 670, 671 Sociology 680 Or others	9 Quarter hours

Note: Students selecting this teaching minor will not take Physical Education 610.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements suggested above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS CURRICULUM

This curriculum provides minimum preparation in technical and professional subjects for teaching home economics on the secondary level in Ohio schools. No minor teaching field is required, but by careful selection of elective courses, it is possible to prepare for another field of teaching. A student selecting home economics as her field of specialization should consult with a home economics adviser in Room 315, Campbell Hall, for the purpose of planning her program.

FIRST YEAR

Education	(408)	3	Fine Arts	(430)	5	English	(418)	3
Home Economics	(405)	3	Home Economics	(450)	3	Psychology	(407)	5
Home Economics	(440)	5	English	(417)	3	Home Economics	(430)	5
English	(416)	3	Psychology	(401)	5	Fine Arts	(437)	3
Physical Education	(400)	1	Physical Education	(422)	1	Physical Education	(423)	1
Physical Education	(421)	1						

SECOND YEAR

*Science	5	*Science	5	Home Economics	(431)	5		
Home Economics	(505)	3	Home Economics	(441)	5	Home Economics	(551)	3
†Economics	(406)	5	Sociology	(401)	5	§Elective	3	
Physical Education	(425)	1	Physical Education	(426)	1	Bacteriology	(509)	5
Elective	1					Physical Education	(427)	1

THIRD YEAR

Home Economics	(506)	5	Home Economics	(561)	3	Home Economics	(541)	5
or			Home Economics	(503)	5	Education	(534)	4
Home Economics	(512)		or			Education	(632 or 636)	4
Home Economics	(550)	3	§ Elective	10		§ Elective		3
Education	(533)	4						
§ Elective		4						

FOURTH YEAR

Home Economics	(560)	3	Education	(536E)	7-12	Education	(607)	3
Sociology	(600)	4	§ Elective		5	§ Elective		12
Physical Education	(610)	3				Elective (Professional)		2
Elective		4-6						

* Science. Two five-hour courses in one of the following sciences: botany, zoology, chemistry. Students who expect to take more than ten hours of chemistry should take Chemistry 407 and 408.

† Economics 401-402 may be substituted for Economics 406.

§ These hours may be used for broadening courses or for acquiring credit in a minor teaching field. Credit in home economics courses shall be limited to a maximum of sixty Quarter-credit hours. Nine hours of the total number of electives must be chosen from one or more of the four fields—Fine Arts, Music, Philosophy, and Religion—and selected from the approved list of courses on page 40.

|| Registration for Education 536 includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall. Students must also register with the Home Economics Education Division, Room 315, Campbell Hall, before teaching assignments will be made.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS—MINOR TEACHING FIELD

Minimum requirement: 45 Quarter-credit hours.

A minimum of 9 hours should be selected in each of the following areas: (a) Child Development and Family Living, (b) Foods and Nutrition, (c) Textiles and Clothing; and a minimum of 5 hours both in (d) Home Management and Family Economics, and (e) Housing, Home Furnishings, and Equipment.

Suggested courses:

- (a) Child Development and Family Living; Home Economics 405, 561, 515.
- (b) Foods and Nutrition; Home Economics 440, 441.
- (c) Textiles and Clothing; Home Economics 430, 431.
- (b) Home Management and Family Economics; Home Economics 518, 559, 560.
- (e) Housing, Home Furnishing, and Equipment; Home Economics 450, 506, 512.

NOTE: Students interested in planning a minor should consult a Home Economics adviser in Room 815, Campbell Hall.

INDUSTRIAL ARTS EDUCATION CURRICULUM

The curriculum in industrial arts education is designed for teachers in elementary, secondary, college, and adult programs. The major in industrial arts education consists of sixty-eight Quarter-credit hours of technical work in education, engineering drawing, industrial engineering, photography, and fine arts, listed in the curriculum of requirements and electives which follow.

FIRST YEAR

Education	(408) 3	English	(417) 3	English	(418) 3
English	(416) 3	Engineering Drawing	(400) 4	Engineering Drawing	(402) 4
Education	(440) 4	Military or Air Science	2	Military or Air Science	2
Psychology	(401) 5	Physical Education	(402) 1	Physical Education	(408) 1
Military or Air Science	2	Physical Education	(400) 1	Elective	3
Physical Education	(401) 1	Welding Engineering	(415) 3	Psychology	(407) 6
	13		14		13

SECOND YEAR

Education	(441) 4	Education	(445) 4	Education	(460) 3
Physics (or)	(411) 5	Physics (or)	(413) 5	Education	(584) 4
Chemistry	(407) 5	Chemistry	(408) 3	Sociology	(401) 5
Industrial Engineering	(420) 5	Education	(533) 4	Elective	3
Military or Air Science	(424) 2	Military or Air Science	(425) 2	Military or Air Science	(426) 2
	16		15		17

THIRD YEAR

Education	(697) 3	Education	(698) 3	Education	(446) 4
Education	(682) 4	Education	(442) 4	Education	(444) 4
Economics	(406) 5	Education	(443) 4	Economics	(510) 5
Physical Education	(610) 3	Elective	4	Elective	4
Industrial Engineering	(404) 3				
	13		15		17

FOURTH YEAR

Education	(679) 3	Education	(607) 3	Education	(585) 4
Education	(586G) 9-15	Education	(555) 3	Electives	12
		Electives	9		
	15		15		16

* Electives must include courses to complete a sixty-eight hour major requirement in the teaching field approved by the student's adviser and the College of Education, and additional professional courses to make a total of forty-five hours professional credit. Education 679 (3 hours) may be counted toward both the teaching and the professional requirement.

The electives must also include at least twenty-five Quarter hours outside the fields of Industrial Arts. At least nine of these twenty-five hours shall be in one or more of the four fields—Fine Arts, Music, Philosophy, and Religion—and selected from the approved list of courses on page 40. Not more than fifteen hours of the broadening courses (which will include the thirty-seven hours required courses listed in the curriculum outline and the additional nine hours above) shall be in one field.

In planning his elective program, the student should study the suggestions made in Section V, page 44.

NOTE: Preparation in a second teaching field is desirable. Since beginning teachers are often expected to teach more than one subject, it is strongly recommended that the student, with the approval of his adviser, achieve preparation in at least one additional teaching field approaching as nearly as possible to the standard training outlined for the teaching fields of the general curriculum (pages 53-67) or in the special curricula (pages 67-94).

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

INDUSTRIAL ARTS EDUCATION—MINOR TEACHING FIELD

Minimum requirement:

42 Quarter-credit hours

Education 440, 441, 443, 445, 446, 679, 585	27
Industrial Engineering 404, 420	8
Engineering Drawing 400	4
Welding Engineering 415	3

Additional courses suggested:

Fine Arts 484, Photography 511
Engineering Drawing 538, 402

Persons planning minors must consult an Industrial Arts Adviser in the area when setting up their programs.

MUSIC

ADMISSION TO THE SCHOOL OF MUSIC

Admission to the School of Music is in charge of the Entrance Committee which determines the placement of students following examination.

Correspondence relating to admission should be addressed to Eugene J. Weigel, Director of the School of Music, Ohio State University, Columbus 10, Ohio.

PROCEDURE FOR ADMISSION

If you enroll in a music program in the School of Music in the College of Education, or as a music major in the College of Arts and Sciences you are required to take a qualifying music examination. The test is designed to demonstrate your aptitude for general musicianship and your ability to play a musical instrument or to sing.

APPOINTMENT FOR PLACEMENT TESTS

Appointments for this examination must be made on Thursday, September 20 in Room 106G, Hughes Hall.

Your music examinations will be given at a free hour not otherwise scheduled in your mimeographed schedule.

Professor Miriam S. Mooney is in charge and will act as the music registrar.

PLACEMENT TESTS

Examinations will be given only on the following dates by appointment (as above):

Autumn Quarter: Thursday, September 20, 1956.

Spring Quarter: Tuesday, March 26, 1957.

(1) Results of the examinations will be posted and will indicate the status of the entering student.

(a) For those who qualify, a classroom card (green) will be issued. No student will be admitted to Applied Music or Theory of Music classes without this admission card.

(b) For those who do not qualify, schedules will be adjusted accordingly and a re-examination date assigned. These students may take academic courses in the interim between admission periods. Such academic credit will be counted toward the music degree after the music entrance examination has been passed. The entrance examination may not be repeated more than once.

(2) Students entering with advanced standing from approved colleges submit through the college registrar an official and explicit transcript describing entrance credits, courses of study and scholarship, and giving evidence of good standing, will be admitted to the University, provided at least an average scholastic record was maintained.

Students so admitted will present the Registrar's record of credit transferred to the Director of the School of Music who will assign a faculty adviser.

A special application blank for students who desire to enter with advanced standing will be forwarded upon request addressed to the University Examiner's office.

(3) Students of mature years who are unable to meet the foregoing entrance requirements in all respects may, under certain circumstances, be permitted to matriculate for specified courses.

The University Examiner is authorized to interpret the phrase "of mature years" to apply to demobilized students not less than 19 years of age and to modify this interpretation, or apply it to other students, within the spirit of these recommendations. An applicant under twenty-one years of age will not be considered. Inquiry concerning such admission should be addressed to the University Examiner. A personal interview with an applicant for admission as a special student is required. This status is not available to students dismissed from the University for academic or other reasons.

REQUIREMENTS FOR ADMISSION TO THE SCHOOL OF MUSIC

Students will be examined in the following subjects:

THEORY AND SIGHT SINGING

1. The ability (a) to recognize and write from dictation (either sung or played on the piano) simple tonal groups in any key; (b) to recognize two and three-part measure and to write from dictation simple rhythms and melodic phrases in these measures.

2. The ability to sing at sight with reasonable accuracy and fluency such music as simple folk tunes and hymns.

3. A knowledge of the rudiments of music, including (a) knowledge of staff degrees; (b) clefs; (c) note values and measure signatures; (d) key signatures; (e) pitch names as represented on the piano and location of whole steps and half steps; (f) major scales.

APPLIED MUSIC (PERFORMANCE)

Examinations in applied music will be given with consideration of the special requirements of the curriculum chosen. Note:

(a) Public school vocal music majors (Curriculum I) may present a voice major and a piano (organ) minor or a piano (organ) major and a voice minor. The requirements for the minor will be general in content.

- (b) Public school instrumental majors (Curriculum II) may present an orchestral instrument or piano provided competency on an orchestral instrument is indicated.
- (c) Music majors in Liberal Arts (Curriculum IV) may present voice, piano, organ or any orchestral instrument.
- (d) Majors in Theory and Composition (Curriculum V) may present any approved applied instrument. It should be noted, however, that piano (408A) for a total of twenty-four credit hours is a requirement for graduation.

The special applied music (performance) requirements may be found in the bulletin of the School of Music, page 28.

MUSIC CURRICULA

CURRICULUM I LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

The following curriculum is offered in the College of Education preparing for *vocal music teaching and supervision* in the public schools.

FIRST YEAR

Suggested Outline of Courses

Music (400K) 0	Music (400L) 0	Music (400M) 2
Music (401) 4	English (416) 3	English (417) 3
Music (406) 3	Music (402) 4	Music (403) 4
Music (408A, B, or F) 2	Music (408A, B, or F) 2	Music (407) 3
Music (A) 1	Music (A) 1	Music (408A, B, or F) 2
Physical Education (400) 1	Psychology (401) 5	Music (A) 1
Physical Education 1	Physical Education 1	Physical Education 1
Military or Air Science or Elective 2	Military or Air Science or Elective 2	Military or Air Science or Elective 2

Freshmen will schedule Autumn Quarter courses as indicated in above outline. Following entrance examinations and admission (see page 77), and for all subsequent Quarters, the student will consult the following advisers concerning details of curriculum and scheduling:

Freshmen: Mrs. Miriam S. Mooney

Sophomores, Juniors, Seniors: Mr. Wayne Ramsey

BASIC CURRICULUM REQUIREMENTS

All candidates will be required to take the following basic course of study with exceptions only as noted.

Major Instrument. 18 credit hour.

Music 408 A, B, or F (6 hours).

Music 508 A, B, or F (12 hours). The proficiency and special requirements are to be as stated in the supplementary Applied Music Bulletin. The major instrument study shall culminate in a public recital. Approval of the applied examining board for junior standing will be prerequisite to presentation of the graduating recital.

Theory. 30 credit hours.

Music 401, 402, 403, 501, 502, 503, 530, 531.

General Education. 45 credit hours.

English 416, 417, 418 (9 hours). *Science (10 hours). **Social Science (10 hours). Music 406, 407, plus one "600" course in music literature (9 hours). Elective (7 hours).

Music Education. 54 credit hours.

Education 520b, 536b, 607.

Psychology 407

Physical Education 610

Music 511A or B (12 hours), 540, 522, 523, 524.

**Social Science. Psychology 401 (5 hours) and one five-hour course selected from the following: Economics 401, Economics 406, Sociology 401, Sociology 407, Anthropology 501, Political Science 401, History 401, 402, 403, 404 and Geography 401.

Ensemble. 11 credit hours.

Music A¹, A², A³, A⁴, or A⁵, of which not less than three credit hours shall be in Music A¹.

Orientation and Recitals. 4 credit hours.

Music 400M (2 hours), 400R (2 hours).

Physical Education. (Women) 7 credit hours.

(Men) 4 credit hours.

Physical Education 400 (Men and Women).

Physical Education 401, 402, 403 (Men).

Physical Education 421, 422, 423, 425, 426, 427 (Women).

Military Science. (Men only) 12 credit hours.**Optional Studies. (Women) 27 credit hours.**

(Men) 18 credit hours.

* Science. Two five-hour courses in one of the following: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, General Studies 431, 432, Geology 451, and Sociology 502.

** Social Science. Two five-hour courses from the following: economics, sociology, history, political science, or geography.

SPECIAL CURRICULUM REQUIREMENTS

In addition to the basic requirements, the student will take or substitute special requirements pertaining to this field as follows:

Major Applied

The choice of a major subject in applied music is made at the time of application for admission to the School of Music. The choice may be piano (Music 408A), voice (Music 408B), or organ (Music 408F). Students may substitute, by permission of the piano instructor, not more than 6 credit hours of organ (Music 408F) to meet the piano major requirements, or 6 credit hours of organ (Music 408F) to meet the piano minor requirement, or 6 credit hours of piano (Music 408A) to meet the organ major requirements.

Graduating Recital

At the conclusion of the sixth Quarter of applied music, all students will be required to take a junior standing examination. A student may not perform a graduating recital until this examination is passed, and continued study on the major instrument will be required until this examination is satisfactory.

Student Teaching

(a) All students in Curriculum I will register for Education 520B (7 hours) and Education 536B (8 hours) for one Quarter, (Autumn,

Winter, or Spring) during their senior year. The selection of the Quarter in which student teaching will be done must meet with the approval of the adviser.

- (b) Prerequisites: Music 511A or B (12 hours), 522, 523, 524, 531, and 540. Approval by the applied examining board for junior standing, and a point-hour ratio of 2.25 in the required music education courses and in the required music courses.

Note: The required point-hour ratio above is computed upon the courses taken at this University only. Students transferring from other institutions and requesting K credit for Education 520A will be required to fulfill the 2.25 point-hour ratio and pass the applied examination for junior standing before credit will be granted.

- (c) At the time of registration for the last Quarter of the junior year, the student will file his application for student teaching in Hughes Hall 106F. Registration further includes the filling out of student-teacher placement cards in Arps Hall 103. This must be done before the student's schedule will be approved by the Secretary of the College.

Registration, Division of Appointments

Students will be required to register with the Office of the Division of Appointments during the Quarter previous to filing the final Quarter's schedule.

Teaching Minor

It is recommended that students pursuing Curriculum I should complete a teaching minor in some academic subject or in the teaching of *instrumental music* (see page 84). Few beginning teachers secure positions where vocal music only is taught. The usual minors chosen are English, History, and Science, but the student should consult his adviser to determine which subject he should follow. Students who work out a minor should elect an education course in the minor subject.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours, including Military Science and Physical Education, and under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

Graduates are entitled, without further examination, to a state provisional special certificate valid for four years. The holder of such special certificate is eligible for appointment as teacher or supervisor of vocal music.

During the first four months of the fourth year of teaching under a four-year provisional certificate, the holder thereof may apply for the renewal of said provisional certificate, or its conversion into an eight-year professional certificate. The eight-year professional certificate may be made permanent upon completion of the necessary requirements by the holder. Definite information on these matters may be obtained directly from the State Department of Education, Columbus 15, Ohio.

Applications for the provisional certificate may be obtained at the office of the Secretary of the College of Education. All applications for these certificates must be filed with the Secretary not later than two months previous to the time at which the degree is expected.

VOCAL MUSIC MINOR

Admission: (a) Students desiring to pursue the *Vocal Music Minor* must pass an entrance examination in elementary theory and sight singing.

(b) Students will not be permitted to take entrance examinations, until they have cleared through the Music Entrance Registrar, Room 106G, Hughes Hall. For examination procedure and dates, see page 77.

(c) Students will not be permitted to take applied music, 511A B or F, unless taken concurrently with at least one other course as listed under the course requirements.

Minimum requirement: 40 Quarter hours.

Courses required: Music 401, 402, 406, 407, 511A and/or 511B (10 hours), 540, 522, 524; membership for a minimum of one year in any campus musical organization listed on pages 222-224.

NOTE: All courses completed under Curriculum I which are required in the Vocal Music Minor may be counted toward the Vocal minor.

CURRICULUM II LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

The following curriculum is offered in the College of Education preparing for *instrumental music teaching and supervision* in the public schools.

FIRST YEAR Suggested Outline of Courses

Music (400K) 0	Music (400L) 0	Music (400M) 2
Music (406) 3	English (416) 3	English (417) 3
Music (401) 4	Music (402) 4	Music (408) 4
Music (408C, D, E, or G) 2	Music (408C, D, E, or G) 2	Music (408C, D, E, or G) 2
Music (B or D) 1	Music (B or D) 1	Music (B or D) 1
Physical Education (400) 1	Psychology (401) 5	Music (407) 3
Physical Education 1	Physical Education 1	Physical Education 1
Military or Air Science or Elective 2	Military or Air Science or Elective 2	Military or Air Science or Elective 2

Freshmen will schedule Autumn Quarter courses as indicated in above outline. Following entrance examinations and admission (see page 77), and for all subsequent Quarters, the student will consult the following advisers concerning details of curriculum and scheduling:

Freshmen: Mrs. Miriam S. Mooney

Sophomores, Juniors, Seniors: Mr. William B. McBride

BASIC CURRICULUM REQUIREMENTS

Major Instrument. 14 credit hours.

Music 408 C, D, E, or G (6 hours).

Music 508 C, D, E, or G (8 hours). The proficiency and special requirements are to be as stated in the supplementary Applied Music Bulletin. The major instrument study shall culminate in a public recital either solo or small ensemble. Approval of the applied examining board for junior standing at the end of six Quarters will be prerequisite to presentation of the graduating recital.

Minor Instrument. 6 credit hours.

Music 408A.

Theory. 30 credit hours.

Music 401, 402, 403, 501, 502, 503, 530, 531.

General Education. 45 credit hours.

English 416, 417, 418 (9 hours). *Science (10 hours). **Social Science (10 hours). Music 406, 407, plus one "600" course in music literature (9 hours). Elective (7 hours).

Music Education. 57 credit hours.

Psychology 407.

Education 520A, 536A, 607.

Music 511C (4 hours), D (4 hours), E (4 hours), 512 (4 hours from C, D, or E), 513, 540, 522, 541.

**Social Science. Psychology 401 (5 hours) and one five-hour course selected from the following: Economics 401, Economics 406, Sociology 401, Sociology 407, Anthropology 501, Political Science 401, History 401, 402, 403, 404 and Geography 401.

Ensemble. 11 credit hours.

Music B, D (8 hours). Music F4, F5, F6, or F7 (3 hours).

Orientation and Recitals. 4 credit hours.

Music 400M (2 hours), 400R (2 hours).

Physical Education. (Women) 7 credit hours.

(Men) 4 credit hours.

Physical Education 400. (Men and Women).

Physical Education 401, 402, 403 (Men).

Physical Education 421, 422, 423, 425, 426, 427 (Women).

Military Science. (Men only) 12 credit hours.**Optional Studies.** (Women) 22 credit hours.

(Men) 13 credit hours.

* Science. Two five-hour courses in one of the following: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, General Studies 431, 432, Geology 451, and Sociology 502.

** Social Science. Two five-hour courses from the following: economics, sociology, history, political science, or geography.

SPECIAL CURRICULUM REQUIREMENTS

In addition to the basic requirements, the student will take or substitute special requirements pertaining to this field as follows:

Major Applied.

The choice of a major instrument in applied music is made at the time of application for admission to the School of Music. The choice may be piano (Music 408A), stringed instruments (Music 408C), woodwind instruments (Music 408D), brass instrument (Music 408E), or percussion instruments (Music 408G).

Graduating Recital.

At the conclusion of the sixth Quarter of applied music, all students will be required to take a junior standing examination. A student may not perform a graduating recital until the examination is passed, and continued study on the major instrument will be required until this examination is satisfactory.

Student Teaching.

(a) All students in Curriculum II will register for Education 520A (7 hours) and Education 536A (8 hours) for one Quarter (Autumn, Winter, or Spring) during the senior year. The selection of the Quarter in which student teaching will be done must meet with the approval of the adviser.

- (b) Prerequisites: Music 408A (6 hours), Music 511 C, D, and E (12 hours), 513, 522, 531, 540 and 541; approval of the applied examining board for junior standing, and a point-hour ratio of 2.25 in the required music education courses and in the required music courses.

NOTE: The required point-hour ratio above is computed upon the courses taken at this University only. Students transferring from other institutions and requesting K credit for Education 520A will be required to fulfill the 2.25 point-hour ratio and pass the applied examination for junior standing before credit will be granted.

- (c) At the time of registration for the last Quarter of the junior year, students will file their application for student teaching in Hughes Hall 106E. Registration further includes the filling out of student-teacher placement cards in Arps Hall 103. This must be done before the student's schedule will be approved by the Secretary of the College.

Registration, Division of Appointments.

Students will be required to register with the Office of the Division of Appointments during the Quarter previous to filing the final Quarter's schedule.

Teaching Minor.

It is recommended that students pursuing Curriculum II should complete a teaching minor in some academic subject or in the teaching of vocal music or stringed instruments (see pages 81 and 84). Few beginning teachers secure positions where instrumental music only is taught. The usual minors chosen are English, History and Science, but the student should consult his adviser to determine which subject he should follow.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours, including Military Science and Physical Education, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

Graduates are entitled, without further examination, to a state provisional special certificate valid for four years. The holder of such special certificate is eligible for appointment as teacher or supervision of instrumental music.

During the first four months of the fourth year of teaching under a four-year provisional certificate, the holder thereof may apply for the renewal of said provisional certificate, or its conversion into an eight-year professional certificate. The eight-year professional certificate may be made permanent upon completion of the necessary requirements by the holder. Definite information on these matters may be obtained directly from the State Department of Education, Columbus 15, Ohio.

Application for the provisional certificate may be obtained at the Office of the Secretary of the College of Education. All applications for these certificates must be filed with the Secretary not later than two months previous to the time at which the degree is expected.

INSTRUMENTAL MUSIC MINOR

Admission: (a) Student desiring to pursue the *Instrumental Music Minor* must pass an entrance examination in elementary theory and sight singing.

(b) Students will not be permitted to take entrance examinations until they have cleared through the Music Entrance Registrar, Room 106G, Hughes Hall.

For examination procedure and dates, see page 77.

(c) Students will not be permitted to take applied music 411C, D, or E, unless taken concurrently with at least one other course as listed under the course requirements.

Minimum requirement: 40 Quarter hours.

Courses required: Music 401, 402, 406, 407, 511C, D, or E (10 hours), 540, 522, 541; membership for a minimum of one year in any campus musical organization listed on pages 222-224.

NOTE: All courses completed under Curriculum I and which are required in the Instrumental Music Minor may be counted in full toward the minor.

STRING INSTRUMENT MINOR

Admission: (a) Students desiring to pursue the special string minor must pass an entrance examination in elementary theory and sight singing.

(b) Students will not be permitted to take entrance examinations until they have cleared through the Music Entrance Registrar, Room 106G, Hughes Hall. For examination procedure and dates, see page 77.

Minimum requirements: 41 Quarter hours.

Courses required: Music 401, 402, 406, 407, 14 hours from 408C, 511C or 512C, (distribution of hours at the discretion of the adviser), 540, 522, 541.

NOTE: All courses completed under Curriculum I or Curriculum II and which are required in the String Instrument Minor may be counted in full toward the instrumental minors.

CURRICULUM III

LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

Curriculum III is offered in the College of Education and qualifies for the degree Bachelor of Science in Education. It is a combination of Curricula I and II and prepares for both *vocal and instrumental music teaching and supervision* in the public schools. The credit-hour requirement for graduation in this *five-year* curriculum is two hundred and forty-one quarter hours.

For details of the curriculum, consult the bulletin of the School of Music, page 41.

MUSIC—TWO DEGREES

A student who wishes to qualify for the two degrees—Bachelor of Science in Education in Music Curricula I or II, and Bachelor of Music in curriculum V—must meet the following conditions: (1) he must be approved for admission to each of the two curricula in music by the Executive Committee of the School of Music, (2) he must meet all group, course and proficiency requirements of each curriculum, (3) he must complete a minimum total of 226 Quarter credit hours, including Military Science and Physical Education. The student's program can be planned so that the two degrees may be conferred simultaneously or his program may be planned so that the two degrees will be conferred at different convocations. A student who has completed the course in student teaching will not be recommended for the degree Bachelor of Music until he has met all requirements of the degree of Bachelor of Science in Education.

PHYSICAL EDUCATION—MEN

Students successfully completing this curriculum receive certificates from the State Department of Education in health and physical education. The purpose of the curriculum is to prepare teachers of school health education and physical education, including athletics. This curriculum also prepares students for various positions in city and state supervision, in recreation, in camp counseling.

NOTE: For an added special competency in health education students should elect from the courses included in the school health education special teaching curriculum.

FIRST YEAR

Education	(408)	3	English	(417)	3	English	(418)	3
English	(416)	3	Zoology	(401)	5	Psychology	(407)	5
Physical Education	(411)	1	Physical Education	(412)	1	Physical Education	(413)	1
Psychology	(401)	5	Military or Air Science	2	Military or Air Science	2		
Military or Air Science	2		Elective	5	Elective	5		
*Elective	5							

SECOND YEAR

†Science	5	†Science	5	Anatomy	(504)	5		
†Social Science	5	†Social Science	5	Physical Education	(410)	5		
Physical Education	(414)	2	Physical Education	(415)	2	Physical Education	(416)	2
Military or Air Science	2	Military or Air Science	2	Military or Air Science	2	Military or Air Science	2	2
Elective	3	Elective	3	Elective	3 to 5			

THIRD YEAR

Education	(533)	4	Physical Education	(446)	3	Physical Education	(549)	2
Physical Education	(449)	3	Physical Education	(647)	3	Physical Education	(644)	4
Physical Education	(691)	3	Physical Education	(692)	3	Physical Education	(648)	3
Physiology	(421)	5	Physiology	(422)	5	Physical Education	(621)	5
			Elective (Professional)	3	Elective			5

FOURTH YEAR

¶Education	(536S)	5	Physical Education	(682)	5	¶Education	(536S)	4
Physical Education	(685)	4	Education	(632 or 686)	4	Physical Education	(540)	2
Physical Education	(630)	5	Physical Education	(443)	2	Education	(607)	3
Elective (Professional)	3		Physical Education	(447)	2	Elective (Professional)	3	
			Physical Education	(645)	3			

* At least nine hours of electives must be selected from philosophy, fine and applied arts, and music.

† Science: Ten (10) hours to be selected from the following: Chemistry 407, 408; Zoology 402, 403, 412; Bacteriology 509, 607; Physics 411, 412, 413, 420; Botany 401, 402.

‡ Social Science. Sociology 401 and either 402 or 407; Sociology 401 and Anthropology 501; or Sociology 401 and Economics 406. (Sociology 401 and Economics 406 will complete the prerequisites for "600" courses in either subject.)

§ In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Coordinator of Student Field Experience, Room 103, Arps Hall, their applications for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

|| Registration for Education 536 includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall. A minimum point-hour average of 2.25 on all courses in the major elected prior to the Quarter of student teaching is required for admission to student teaching, Education 536. The major includes the courses in physical education and Anatomy 504.

NOTE: Students who desire to pursue the curriculum in Physical Education should consult with the Chairman of the Department of Physical Education, Men's Division, Physical Education Building, before registering.

NOTE: All students taking Physical Education as a teaching field or for minimum certification credit must secure the approval of the departmental adviser upon each Quarter's schedule before presenting the schedule card at the College Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676).

NOTE: Beginning teachers are generally expected to teach more than one subject. It is strongly recommended, therefore, that the student in this curriculum, with the approval of the departmental adviser, shall achieve preparation in at least one additional teaching field as outlined for the general curriculum (pages 53-67) or the special curriculum (pages 67-84).

A teaching field (i.e. for certification as a major) in biological science must meet the following requirements: (1) Courses corresponding as closely as possible to the recommended program in biological science on page 53, with any variations therefrom approved by the Secretary of the College or the College adviser for biological science; (2) an average point-hour ratio of at least 2.25 on all courses in the biological science group; (3) Education 534 and 638. These courses may be credited as professional electives if desired.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

CORRECTIVE THERAPY—MEN

The Ohio State University through an official affiliation with the Veterans Administration prepares men as corrective therapists for employment under Civil Service Regulations in Veterans Administration Hospitals throughout the United States.

Students enrolled in the physical education teaching curriculum can qualify for positions in corrective therapy by indicating a particular interest prior to completing their junior year. This preparation will be obtained without sacrificing certification in health and physical education by completing additional selected courses in the area of abnormal psychology, advanced adapted physical education and medical implications of rehabilitation.

In order to meet the requirements for employment in the Veterans Administration as corrective therapists, students must secure 240 clock hours of clinical laboratory experience in Veterans Administration general, medical, and surgical, and psychiatric hospitals. If not so obtained, students will be required to participate in four additional Quarter hours of education through a specialized form of supervised teaching.

PHYSICAL EDUCATION, MEN'S DIVISION—MINOR TEACHING FIELD

Minimum requirement: 36 Quarter-credit hours. Valid for certification in Health and Physical Education for service in grades 7-12 inclusive.

Courses recommended: Non-duplicating courses selected with the approval of a departmental adviser; minimum Quarter-credit hours are indicated for each group.

Group I. Principles, Organizations and Administration of Physical Education, including Athletics and Recreation: 5 Quarter hours. Physical Education *621 and additional credits may be elected from Physical Education 540, 615, 682, and Education 731.

Group II. Activities, Skills and Methods of Teaching: 6 Quarter hours. Physical Education 411, 412, 413, 414, 415, 416, 632, 647.

Group III. Activities, Skills and Methods of Teaching: 6 Quarter hours. Physical Education 443, 446, 447, 449, 549, 601, 635, 648.

Group IV. Methods and Materials in Teaching Health: 5 Quarter hours. Physical Education 644, 692.

Group V. Health and Hygiene: 6 Quarter hours. Physical Education 410, 641, 645, 685.

Group VI. Human Anatomy and/or Physiology: 9 Quarter hours. Anatomy 504, Physiology 421, 422, 506, 507.

* This course, or its equivalent from an accredited college, is required by Ohio State University for all students earning either the minor or the major in physical and school health education.

NOTE: Students wishing to complete this minor curriculum in physical and health education must consult the Department advisers.

PHYSICAL EDUCATION—WOMEN

REQUIREMENTS FOR STUDENTS SPECIALIZING IN PHYSICAL EDUCATION

Students successfully completing this curriculum receive certificates from the State Department of Education in health and physical education. The purpose of the curriculum is to prepare teachers of school health education and physical education, including athletics. This curriculum also prepares students for various positions in city and state supervision, in recreation, in camp counseling.

Students who select Physical Education as a major must attain standards in physical education activities which are set by the department before they may enter the junior professional courses. This will often necessitate taking additional work in "400" courses without credit.

FIRST YEAR

Education	(408) 3	Psychology	(407) 5	English	(417) 3
Psychology	(401) 5	English	(416) 3	*Social Science	5
Zoology	(401) 5	Physical Education	(412) 1	Physical Education	(413) 1
Physical Education	(411) 1	Physical Education	(473) 1	†Elective	6
		Elective	5		

SECOND YEAR

Physical Education	(541) 3	Anatomy	(504) 5	Physical Education	(410) 5
Physical Education	(414) 2	Physical Education	(542) 4	Physical Education	(543) 3
English	(418) 3	Physical Education	(415) 2	Physical Education	(416) 2
*Social Science	5	Anatomy	(504) 5	Elective	3
†Science	5	†Science	5	Speech	(504) 3

§THIRD YEAR

Education	(533) 4	Physiology	(422) 5	Physical Education	(644) 4
Physical Education	(545) 3	Physical Education	(692) 3	Physical Education	(630) 5
Physiology	(421) 5	Physical Education	(647) 3	Physical Education	(648) 3
Physical Education	(621) 5	Physical Education	(691) 3	Physical Education	(550) 3
		Elective	3	Elective (Professional)	3

FOURTH YEAR

Education	(536T) 9	Physical Education	(682) 5	Education	(607) 3
Elective	3	Physical Education	(645) 3	Elective	15
Education	(632 or 636) 4	Elective (Professional)	5		

* Social Science, Sociology 401 and either 402 or 407; Sociology 401 and 407; Sociology 401 and Anthropology 501; or Sociology 401 and Economics 406. (Sociology 401 and Economics 406 will complete the prerequisites for "600" courses in either subject.)

† At least nine hours of electives must be selected from philosophy, fine and applied arts, and music.

‡ Ten hours of science must be chosen from the following courses: Zoology 402, 403, 412; Chemistry 407, 408; Bacteriology 509, 607; Physics 411, 412, 413, 420; Botany 401, 402.

§ In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Coordinator of Student Field Experience, Room 103, Arps Hall, their applications for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

NOTE: Students who desire to pursue the curriculum in Physical Education should consult with the Chairman of the Department of Physical Education, Women's Division, Pomerene Hall, before registering.

NOTE: All students taking Physical Education as a teaching field or for minimum certification credit must secure the approval of the departmental adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by her signature on the Adviser's Approval Card (Form 4676).

NOTE: Beginning teachers are generally expected to teach more than one subject. It is strongly recommended, therefore, that the student in this curriculum, with the approval of the department adviser, shall achieve preparation in at least one additional teaching field as outlined for the general curriculum (pages 53-67) or the special curricula (pages 67-94).

A teaching field (i.e. for certification as a major) in biological science must meet the following requirements: (1) Courses corresponding as closely as possible to the recommended program in biological science on page 53; with any variations therefrom approved by the Secretary of the College or the College adviser for biological science; (2) an average point-hour ratio of at least 2.25 on all courses in the biological science group; (3) Education 534 and 683. These courses may be credited as professional electives if desired.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

PHYSICAL EDUCATION—DANCE MAJOR—MEN AND WOMEN

This curriculum prepares students in the field of the dance. Its purposes are: (a) to meet the needs and interest of an increasing number of students who wish to pursue dance as a creative art form, (b) to prepare teachers of dance in the secondary schools, (c) to prepare teachers of dance in colleges and universities.

This curriculum is constructed to continue over a five-year period. However, the Bachelor of Science degree is awarded at the end of the fourth year, and students completing this curriculum receive an Ohio Teacher's Certificate with Physical Education as a teaching minor. For those students who wish to teach dance at the college level, a Master's degree is usually requisite. Departmental advisers are prepared to recommend a fifth year of study in Physical Education leading to the Master of Arts degree for all those students who wish this additional study.

FIRST YEAR

Fine Arts	(421) 5	Fine Arts	(431) 5	Fine Arts	(495) 3
Education	(408) 3	English	(416) 3	English	(417) 3
Psychology	(401) 5	Psychology	(407) 5	Zoology	(401) 5
Physical Education	(411) 1	Physical Education	(412) 1	Physical Education	(413) 1
		Elective	3	*Elective	5

SECOND YEAR

Anatomy	(504) 5	Sociology	(401) 5	Physical Education	(410) 5
Physical Education	(541) 3	Physical Education	(542) 4	Physical Education	(543) 3
Physical Education	(414) 2	Physical Education	(415) 2	Physical Education	(416) 2
English	(418) 3	Elective	6	Sociology (402) or	(407) 5
Speech	(521) 3			Physical Education	(550) 3

THIRD YEAR

General Studies	(431) 5	Physical Education	(631) 3	Physical Education	(632) 3
Education	(533) 4	Physical Education	(691) 3	Sociology	(501) 5
Music	(405) 3	Physical Education	(692) 3	Elective (Professional)	3
Education	(632) or (636) 4	English	(540) 5	Physical Education	(621) 5
		Sociology	(628) 3		

FOURTH YEAR

Education	(536T) 9	Speech	(522) 3	Education	(607) 3
Speech	(541) 3	Physical Education	(682) 5	Physical Education	(651) 2
Physical Education	(651) 2	Physical Education	(651) 2	Elective (Professional)	5
Psychology	(668) 3	Philosophy	(515) 5	Elective	3
				Physical Education	3

* At least nine hours of electives must be selected from philosophy, fine and applied arts, and music.

‡ In connection with registration for the last Quarter of their third year, all students pursuing this curriculum must file with the Coordinator of Student Field Experience, Room 103, Arps Hall, their application for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

§ Choice of Physical Education 545, 549, 647, 648.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

PHYSICAL EDUCATION, WOMEN'S DIVISION

MINOR TEACHING FIELD

Minimum requirement: 36 Quarter-credit hours. Valid for certification in health and physical education for service in grades 7-12, inclusive.

Courses recommended: Non-duplicating courses selected with the approval of a departmental adviser; minimum Quarter-credit hours are indicated for each group.

Group I. Principles, Organization and Administration of Physical Education, including Athletics and Recreation: 5 Quarter hours. Physical Education *621 and additional credits may be selected from Physical Education 615, 682, and Education 731.

Group II. Activities, Skills, and Methods of Teaching: 6 Quarter hours. Physical Education 411, 412, 413, 476, 482, 541, 542, 543, 550, 631, 632, 647, 648.

Group III. Activities, Skills, and Methods of Teaching: 6 Quarter hours. Physical Education 414, 415, 416, 541, 542, 543, 545, 549, 635, 647, 648.

Group IV. Methods and Materials in Teaching Health: 5 Quarter hours. Physical Education 644, 692.

Group V. Health and Hygiene: 6 Quarter hours. Physical Education 410, 641, 645.

Group VI. Human Anatomy and/or Physiology: 9 Quarter hours. Anatomy 504. Physiology 421, 422, 640.

* This course, or its equivalent from an accredited college, is required by Ohio State University for all students earning either the minor or the major in physical and school health education.

NOTE: Students wishing to complete this minor curriculum in physical and health education must consult the Department advisers.

PUBLIC RECREATION

A program designed especially to prepare personnel for employment in public recreation is available through a cooperative arrangement with the School of Social Administration. This course of study leads to the degree of Bachelor of Science in Social Administration. Students interested should consult advisers in the Department of Physical Education or School of Social Administration. The plan of study in recreation is administered by a joint committee of those two departments composed of Professors W. V. Batchelor, Margaret A. Mordy, Delbert Oberteuffer, and Everett C. Shimp.

RADIO-SPEECH EDUCATION CURRICULUM

The curriculum in Radio-Speech Education is designed to prepare students with special interests and abilities for broadcasting responsibilities in elementary and secondary schools, and for the teaching of Speech in secondary schools. Certification by the State Department of Education makes the double major essential since students must be equipped to teach general speech education in junior and senior high schools as well as to prepare and supervise radio workshops and elementary and secondary school broadcasting programs.

A written statement of acceptance into the curriculum, signed by the co-advisers of the program of study (Professor John T. Rickey, Speech Adviser of the College, and Professor Keith Tyler, Coordinator of Radio Activities of the University), must be filed in the College Office.

FIRST YEAR

Education	(408)	3	English	(417)	3	English	(418)	3
English	(416)	3	Psychology	(401)	5	Psychology	(407)	5
Radio	(405)	2	*Science		5	Speech	(417)	2
*Science		5	Physical Education		1	or Speech	(509)	2
Speech	(416)	5	Military or Air Science		2	Speech	(402)	5
Physical Education		1				Elective		3
Military or Air Science		2				Physical Education		1
						Military or Air Science		2

SECOND YEAR

Economics	(401)	5	Economics	(402)	5	Speech	505)	5
Education	(514)	4	Speech	(480 or 522)	3	or		
Speech	(580)	3	Speech	(560)	3	Speech	(470)	5
Speech	(521)	3	Speech	(504)	3	Speech	(508)	2
Physical Education		1	Elective		3	Education	(533)	4
Military or Air Science		2	Physical Education		1	Speech	(565)	3
			Military or Air Science		2	Education	(505)	3
						Physical Education		1
						Military or Air Science		2

THIRD YEAR

Speech	(541)	3	Speech	(552)	3	Business Organization	(520)	3
Speech	(545)	3	Education	(513)	4	Speech	(554)	3
Journalism	(508)	3	or			Radio	(555)	
Radio	(555)		Education	(516)	4	or		
or			Radio	(555)		Speech	(556)	
Speech	(566)		or			Elective		6
Speech	(562)	3	Speech	(566)				
Psychology	(532)	3	Speech	(501)	3			
Elective		5	Elective		6			

FOURTH YEAR

Education	(601)	3	Education	(600J)		Education	(536U)	
Speech	(594)	3	or			and		
Speech	(672)	3	Speech	(700)		Education	(537C)	15
Education	(627)	3	Education	(628)	3			
Education	(607)	3	Speech	(670)	2			
			Physical Education	(610)	3			
			Elective		6			

* Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, General Studies 431, 432; Geology 451, and Sociology 502, or other appropriate five-hour course.

§ Fifteen hours of nonprofessional elective courses must be chosen, with the approval of the co-advisers, from the following areas: social studies, English, music, philosophy, and psychology. In choosing the fifteen hours of electives, care shall be taken that when the electives are combined with the required "broadening" courses, the result will not show more than fifteen hours in any one field.

|| Students who have had broadcasting experience with young people may petition to have this experience considered equivalent to Education 505; if the petition is granted, three hours of elective courses are thus added to their programs.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

SPEECH AND HEARING THERAPY CURRICULUM

This curriculum is designed to meet the needs of students who wish to become speech and hearing therapists. It leads to the degree B.S. in Education and a special certificate issued by the State Department of Education. Graduates serve all age-levels, working in elementary, secondary, and special schools or in institutional positions. Both individual and small group instruction are responsibilities of the therapist; and ability to deal with speech and/or hearing as a major or minor problem or one aspect of multiple handicaps is essential. The therapist has to work with people of all ages, and

especially with those whose speech and hearing problems are related to personality disturbances or social maladjustment; hence, the curriculum provides a strong background in psychology, a competent understanding of child growth and development, and emphasizes the importance of correlating all therapy with the school or educational program.

This program provides also the opportunity to gain knowledge in fields removed from the professional areas of speech and psychology. As a part of the general requirements of the College, 30 hours must be elected in such fields as English, Music, Art, History, Philosophy, etc. It is recommended that the student take an additional summer Quarter in order to secure additional broadening courses and to add extra hours of practical experience in working with children or adolescents.

Students who wish to enroll must possess the personal qualifications important to their professional success and a pre-admission conference is required. At this time the individual needs, interests, and questions of the prospective therapist are discussed. (Write or arrange for a conference with Dr. Virginia Sanderson, Adviser, 321 Arps Hall.)

FIRST YEAR

Education	(408) 3	Psychology	(401) 5	English	(418) 3
Zoology	(401) 5	Zoology	(402) 5	Psychology	(407) 5
English	(416) 8	English	(417) 3	Anatomy	(504) 5
Military or Air Science	2	Military or Air Science	2	Elective	3
Physical Education	1	Physical Education	1	Military or Air Science	2
Physical Education	(400) 1	Elective	3	Physical Education	1

SECOND YEAR

Sociology	(401) 5	Sociology	(402) or (407) 5	Speech	(590) 3
Speech	(580) 5	Speech	(585) 3	Education	(533) 4
Elective	5	Education	(513) or (556) 3	Education	(514) 4
Military or Air Science	2	Elective	5	Elective	3
Physical Education	1	Military or Air Science	2	Military or Air Science	2
		Physical Education	1	Physical Education	1

THIRD YEAR

Speech	(682) 3	Speech	(688) 3	Speech	(684) 3
Speech	(694) 3	Speech	(677) 5	Speech	(688) 3
Psychology	(610) 3	Speech	(695) 3	Speech	(696) 3
Psychology	(668) 5	Psychology	(609) 3	Speech	(697) 3
or		Education	(667) 3	Psychology	(613) 3
Sociology	(680) 4			Elective	3
Speech	(504) 3				
or Speech	(417) 2				

FOURTH YEAR

Education	(668) 5	Psychology	(671)	Education	(537E) 10-15
Psychology	(684) 3	or Psychology	(615) 3	Elective	
Speech	(698) 3	Education	(607) 3		
Psychology	(690) 3	Physical Education	(610) 3		
Psychology	(688) 3	Elective	6		

Two hundred clock hours of practical experience in Speech and Hearing Therapy under expert supervision are required for graduation and for state certification. Approximately one hundred hours will be provided for in the Speech Clinic as clinical practice in speech courses required in this curriculum. A minimum of one hundred hours which must be done in the public school in partial fulfillment of student teaching requirements will be provided for in Education 537E. Education 764, Supervised Teaching in Special Classes, may be substituted for Education 537E by graduate students who have credit for the undergraduate teaching course, or its equivalent.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

CURRICULUM IN TRADE AND INDUSTRIAL EDUCATION

This curriculum is designed for the preparation of shop and related-subject teachers in secondary school programs in trade and industrial education. The major consists of sixty-eight Quarter-credit hours secured through credit for shop experiences (not more than thirty Quarter-credit hours), courses in education, engineering drawing, industrial engineering, photography, and fine arts, listed in the curriculum of requirements and electives which follows:

FIRST YEAR

Education	(408)	3	Psychology	(407)	5	English	(418)	3
English	(416)	3	Engineering Drawing	(402)	4	Mathematics	(416)	5
Engineering Drawing	(400)	4	English	(417)	3	Physical Education	(403)	1
Psychology	(401)	5	Physical Education	(402)	1	Military or Air Science		2
Physical Education	(401)	1	Military or Air Science		2	Elective		8
Military or Air Science		2	Industrial Engineering	(404)		Physical Education	(400)	1
Welding Engineering	(415)		or Elective		3			
or Elective		3						

SECOND YEAR

Mathematics	(417)	5	Chemistry	(412)	5	Education	(533)	4
Chemistry	(411)	5	Education	(576)	3	Education	(577)	3
Education	(575)	3	Industrial Engineering	(420)	5	Military or Air Science		2
Military or Air Science		2	Military or Air Science		2	*Elective		3 or 5
*Elective		3	*Elective		2 or 3	Chemistry	(413)	5
Photography	(511)	3	Engineering			Sociology	(401)	5
Political Science	(401)	5	Drawing	(403)	4	Fine Arts	(421)	5
			Photography	(511)	3			
			Geography	(401)	5			

THIRD YEAR

Physics	(411)	5	Education	(534)	4	Physics	(413)	5
Economics	(406)	5	Education	(679)	3	Education	(580)	3
Education	(578)	3	Economics	(510)	5	Education	(641)	3
*Elective		3 or 5	*Elective		5 or 7	Education	(698)	3
History	(403)	5	Engr. Drawing	(421)	3	*Elective		3 or 5
Fine Arts	(421)	5	Physics	(412)	5	Economics	(639)	4
			History	(404)	5	Geography	(603)	3
			Physical Education	(610)	3	Education	(714)	3

FOURTH YEAR

Education	(536H)	7	Education	(607)	3	Education	(752)	5
Education	(750)	3	Economics	(688)	3	Education	(755)	3
*Elective		5 or 8	*Elective		9-12	Education	(680)	3
Education	(751)	3	Engr. Drawing	(422)	3	Elective		5 or 7
Education	(678)	5	Psychology	(610)	3	Economics	(639)	3
Economics	(637)	5	Psychology	(618)	3	Psychology	(609)	3
			Political Science	(401)	5	Education	(717)	3
			Education	(770)	3			

* Electives must include courses to complete a sixty-eight hour major requirement in the teaching field approved by the student's adviser and the College of Education, and additional professional courses to make a total of forty-five hours professional credit. Education 577 (3 hours) may be counted toward both the teaching field and the professional requirement. Electives in the junior and senior year must be chiefly in the 600 and 700 group and must be approved by the major adviser. The electives must also include at least twenty-five Quarter hours outside the field of trade and industrial education.

NOTE: Students pursuing the curriculum in trade and industrial education must secure the approval of the trade and industrial education adviser upon each Quarter's schedule before presenting the schedule card at the College Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676).

NOTE: For men over twenty-five, Military Science is an elective.

RELATED SUBJECTS

Persons preparing to teach shop mathematics and science should elect in addition to the prescribed courses in mathematics and science: Physics 412 or Chemistry 413. The methods course, Education 680, is a prescribed course.

Persons preparing to teach blueprint reading and drawing should elect in addition to the prescribed courses in drawing Engineering Drawing 403, 421, 422, and Fine Arts 421. The methods course, Education 698, is a prescribed course.

Persons preparing to teach industrial history and other social studies should elect in addition to the prescribed courses in the social studies field History 403 and 404, Geography 401 or 603, Economics 510 and 637, and Education 677.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

CURRICULUM IN ELEMENTARY EDUCATION

The following curriculum is directed toward the preparation of elementary school teachers. All students who complete this curriculum are eligible for the four-year provisional elementary teacher's certificate in the state of Ohio. With minor modifications in the curriculum, students may also qualify for the kindergarten-primary certificate.

REQUIREMENTS FOR A DEGREE

FIRST YEAR

Education	(408) 3	*Science	5	Psychology	(407) 5
*Science	5	English	(417) 3	English	(418) 3
English	(416) 3	Geography	(401) 5	*Science	5
Psychology	(401) 5	Military or Air Science	2	Military or Air Science	2
Military or Air Science	2	Physical Education	1	Elective	3
Physical Education	1	Physical Education	(400) 1	Physical Education	1

* Science. Fifteen hours of science are required, of which not less than five credit hours must be taken from each group below. Each course listed is a five credit hour course. Five hundred level courses require sophomore standing.

† Physical Education 400 may be taken during any of the first three Quarters.

Group A—Biological Sciences

Botany 401, 402
Zoology 401, 402, 412
Bacteriology 509
Physiology 421, 422
Anthropology 502

Group B—Physical Sciences

Chemistry 407, 408
Physics 411, 412, 413, 420
Geology 451
Astronomy 500
General Studies 431, 432

SECOND YEAR

Sociology	(401) 5	Sociology	(407) 5	History	(404) 5
History	(403) 5	or		Music	(548) 3
Music	(546) 2	Anthropology	(501) 5	Physical Education	(476) 3
a) Education	(514) 4	Music	(547) 3	a) Education	(510) 3
Military or Air Science		a) Education	(521) 3	Speech	(504) 3
(Men)	2	Geography	(403) 5	Military or Air Science	
Physical Education		Military or Air Science		(Men)	2
(Women)	1	(Men)	2	Physical Education	
		Physical Education		(Women)	1
		(Women)	1		

a) Education courses so marked are scheduled every Quarter. Education 514 is a prerequisite to many courses in the Education sequence.

THIRD YEAR

a) Education	(515) 4	a) Education	(528) 3	a) Education	(516) 4
a) Education	(522) 5	Fine Arts	(569) 5	a) Education	(517) 4
* Psychology	8	† Elective	7-10	Physical Education	(609) 3
† Elective	3-6			† Elective	4-7

* Students will elect one of the following courses in Psychology during the junior year: Psychology 610, 609, 618, 688, 690.

† Electives. The students who are following this curriculum must elect at least 20 hours in some one cultural field in addition to required courses. Appropriate courses are usually in the 500-600 numbered series in such fields as English, history, psychology, and sociology, but include 400-500 numbered courses in such fields as fine arts, music, and certain of the sciences, by arrangements with the staffs in those departments. In special cases, courses from two related fields will be accepted as meeting the twenty-hour sequence requirement. Examples are psychology-sociology, economics-history, and English-speech.

a) Education courses so marked as scheduled every Quarter. Education 516 and Education 517 should be scheduled the same Quarter on the same days of the week and at consecutive hours. It is recommended that they be scheduled within two Quarters prior to registration in Education 518.

FOURTH YEAR

a) Education	(632) 4	a) * Education	(518) 12-15	Education	(607) 3
Fine Arts	(570) 8	Elective	8	Elective	9-15
Elective	8-11				

* For all students pursuing the elementary curriculum an average point-hour ratio of 2.25 on all required professional courses taken at this University will be required for admission to supervised student teaching (Education 518). Professional courses include Education 408 Psychology 407, all education courses, Fine Arts 569 and 570, Music 546, 547, 548, Physical Education 476 and 609. A minimum of 12 Quarter hours of Education 518 is required for graduation and certification. Fifteen hours of Education 518 may be elected which involve full day student teaching. The total schedule, for the Quarter in which a student elects Education 518, may not exceed fifteen hours.

† Education 607 should be taken after Education 518.

a) Education courses so marked are scheduled every Quarter.

ELEMENTARY TEACHER'S CERTIFICATE

Students who have completed the foregoing curriculum, as outlined, are eligible for the four-year provisional elementary certificate, valid in grades one through eight.

KINDERGARTEN-PRIMARY TEACHER'S CERTIFICATE

Students who wish to qualify for the kindergarten-primary certificate in Ohio will complete the requirements for the elementary certificate as listed above. They will also take Education 509 and do student teaching at the appropriate level. Home Economics 661 and Sociology 680 are recommended. The student must declare his intention when he registers for student teaching and will secure the approval of the elementary education staff.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

ARTS—EDUCATION

CURRICULUM IN ELEMENTARY EDUCATION

The following curriculum prepares for teaching in the elementary grades (I to VIII) and leads to the two degrees Bachelor of Arts and Bachelor of Science in Education. The student pursuing this curriculum should register in both Colleges—Arts and Sciences and Education—as soon as he has decided to become a candidate for the two degrees. The program of study each Quarter must be approved by appropriate advisers and by the secretaries of both colleges.

The curriculum outline as printed here covers fourteen Quarters of residence. However, able students may seek approval for heavier loads in any Quarter *except* the one in which student teaching (Education 518) is scheduled, and complete the program in approximately thirteen Quarters.

The student's program can be planned so that the two degrees may be conferred simultaneously. However, if preferred, the program may be planned so that the degree will be conferred at different Convocations. A student who has completed the course in student teaching will not be recommended for the degree Bachelor of Arts until he has met all requirements for the degree of Bachelor of Science in Education.

First Quarter			Second Quarter			Third Quarter		
History	(421)	5	History	(422)	5	History	(423)	5
English	(416)	3	English	(417)	3	English	(418)	3
Foreign Language		5	Foreign Language		5	Foreign Language		5
Arts Survey	(401)	1	Physical Education	(400)	1	Physical Education	(428)	1
Physical Education (Women)	(421)	1	Physical Education (Women)	(422)	1	Physical Education (Women)		
or			or			or		
Physical Education (Men)	(401)	1	Physical Education (Men)	(402)	1	Physical Education (Men)	(403)	1
Military or Air Science (Men)		2	Military or Air Science (Men)		2	Military or Air Science (Men)		2
Elective		3	Elective		3			
		18 or 20			18 or 20			16 or 18
Fourth Quarter			Fifth Quarter			Sixth Quarter		
Sociology	(507)	5	Political Science	(507)	5	Geography	(401)	5
Psychology	(401 or 403)	5	or Economics	(507)		Education	(514)	4
*Natural Science		5	Psychology	(407)	5	Physical Education	(427)	1
Physical Education (Women)	(425)	1	*Natural Science		5	Physical Education (Women)		
or			Physical Education	(426)	1	or		
Military or Air Science (Men)		2	Military or Air Science (Men)		2	Military or Air Science (Men)		2
		16 or 17			16 or 17	*Natural Science		5
						Elective		3
								18 or 19
Seventh Quarter			Eighth Quarter			Ninth Quarter		
Arts major		5	Arts major		5	Arts major		5
Education	(515)	4	Education	(510)	3	†Fine Arts	(569)	5
English	(505)	5	Education	(522)	5	Physical Education	(476)	3
Education	(521)	3	or, Education	(600g)	3	Philosophy	(551)	3
		17	Elective		4	or Philosophy	(552)	3
					15 or 17			16
Tenth Quarter			Eleventh Quarter			Twelfth Quarter		
†Music	(404)	3	Arts major		5	Education	(516)	4
or			Arts major		5	Education	(517)	4
Arts Survey	(608)	5	†Music	(547)	3	Arts major		5
†Fine Arts	(570)	3	†Psychology		3	†Music	(548)	3
Arts major		5						
		16			16			16
Thirteenth Quarter			Fourteenth Quarter					
Education	(518)	12	Education	(607)	3			
Education	(528)	3	Physical Education	(609)	3			
			Arts major		5			
			Elective		5			
		15			16			

* Natural Science: See courses appropriate for this requirement in the Bulletin of the College of Arts and Sciences.

† These courses meet the fine arts appreciation and music appreciation requirements of the Arts College.

‡ One of the following: Psychology 609, 610, 618, 663, 683, 690.

§ For all students pursuing this curriculum an average point-hour ratio of 2.25 on all required professional courses taken at this University will be required for admission to supervised student teaching (Education 518). Professional courses include Education 408, Psychology 407, all education courses, Fine Arts 569 and 570, Music 404 (or 505), 547, 548, Physical Education 476 and 609.

|| Counted toward the philosophy requirement of the Arts College.

ELEMENTARY TEACHER'S CERTIFICATE

Students who have completed the foregoing curriculum, as outlined, are eligible for the four-year provisional elementary certificate, valid in grades one through eight.

KINDERGARTEN-PRIMARY TEACHER'S CERTIFICATE

Students who wish to qualify for the kindergarten-primary certificate in Ohio will complete the requirements for the elementary certificate as listed above. They will also take Education 509 and do student teaching at the appropriate level. Home Economics 661 and Sociology 680 are recommended. The student must declare his intention when he registers for student teaching and must secure the approval of the elementary education staff.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of two hundred and twenty-six Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the two degrees Bachelor of Arts and Bachelor of Science in Education.

STUDY-SERVICE CURRICULUM

The College of Education offers a new program of *study and teaching service* leading to the degree Bachelor of Science in Education. Completion of the full program will entitle the student to recommendation from the College of Education for provisional state certification to teach in the elementary and junior high schools and in one teaching area in the senior high schools. The complete program will normally require six calendar years, during four school years of which the student may serve as a full-time employed teacher in the public schools of Ohio on a Cadet Certificate.

The student who desires certification to teach in the *elementary grades only* may qualify for the degree and for the standard four-year Provisional Elementary Teachers' Certificate in five calendar years, including the initial two years (eight Quarter) on the Campus and three years of teaching in the elementary grades.

At the end of the first eight Quarters, the student, upon recommendation of the College of Education, will be eligible for the Provisional Cadet Elementary Teacher's Certificate issued by the State Department of Education and may enter the *service period* of his degree program provided he can secure placement as an employed teacher in an approved school. During the period of teaching service, the student will carry course work while on the job in the form of special seminars and Twilight School courses, and will return to the campus for full-time study in the Summer Quarters.

FIRST YEAR

Education	(408) 3	English	(417) 3	English	(418) 3
Education Survey	(407) 2	Psychology	(407) 5	History	(428) 5
English	(416) 3	History	(422) 5	*Science	5
Psychology	(401) 5	Fine Arts	(494) 3	Physical Education	(476) 3
History	(421) 5	Physical Education	1	Physical Education	(400) 1
Physical Education	1	Military or Air Science	2	Physical Education	1
Military or Air Science	2			Military or Air Science	2
	16-18		18-20		18-20

SUMMER

*Science	5
Sociology	(401) 5
Education	(515) 4
Physical Education (Women)	1
Military or Air Science	2

15-16

* Natural Science: Three 5-hour courses from the following list, including at least one course from Group A and one from Group B: (A) Botany 401, 402; Zoology 401, 402, 412; Bacteriology 509; Physiology 421, 422; Anthropology 502. (B) Chemistry 407, 408; Physics 411, 412, 413, 420; Geology 451; Astronomy 500; General Studies 481, 482.

SECOND YEAR

**Education	(514) 8	**Education	(516) 7	**Education	(505) 10
Education	(517) 8	Education	(521) 8	Music	(548) 3
Music	(546) 2	Music	(547) 3	Geography	(503) 3
Geography	(401) 5	Education	(510) 3		
Elective	3	Elective	4		
Physical Education (Women)	1	Physical Education (Women)	1		
Military or Air Science	2	Military or Air Science	2		
	19-20		19-20		16

SUMMER

*Science	5
Fine Arts	(569) 5
Elective	6
	16

TOTAL 136 Quarter hours

** The second year sequence, Education 514-517, 516-521, 505 is a series of workshop-laboratory courses required of, and open only to, students enrolled in this Study-Service Curriculum. It will be offered beginning in the Autumn Quarter 1955. Students may enter the sequence only at the beginning of the Autumn Quarter. Education 505, Spring Quarter, will include supervised teaching experience in the elementary schools concurrently with seminar sessions devoted to consideration of teaching problems.

Provisional Acceptance for Teaching. For admission to Education 505, the student must have fulfilled all criteria for Provisional Acceptance for Teaching, pages 94-97.

Certification. Upon the satisfactory completion of the foregoing eight-Quarter program, and upon recommendation by the College of Education, the student will be eligible to receive from the Ohio State Department of Education a Provisional Cadet Elementary Teacher's Certificate (valid for four years) and to be employed in the public schools under this certificate.

STUDY-SERVICE PROGRAM

Following the completion of the first eight Quarters, the student will continue enrollment in the College of Education and must complete additional *course requirements* specified below under (A) and must follow a pattern of *service and study* as described under (B).

A. REQUIRED COURSES

Required Professional Courses

Education	(522) 5 hours
Education	(523) 3 hours
Education	(518) 12 hours
Education	(607) 3 hours
Physical Education	(609) 3 hours

Required General Education Courses

English	(510 or 540) 5 hours
Speech	(604) 3 hours
Sociology	(407)
or Anthropology	(501) 5 hours
Political Science	(613) 5 hours

Twenty-hour sequence

20 hours

NOTE: Twenty-hour Sequence. All students who are following the curriculum must elect at least 20 hours in some one cultural field in addition to required courses.

For a student who is qualifying to teach in the elementary grades only, appropriate courses are usually in the 500-600 numbered series in such fields as English, history, psychology, and sociology, but include 400-500 numbered courses in such fields as fine arts, music, and certain of the sciences. In special cases, courses from two related fields will be accepted as meeting the twenty-hour sequence requirement. Examples are psychology-sociology, economics-history, and English-speech.

Requirements for Secondary Certification. In addition to the foregoing required General Education and Professional Courses, the student qualifying for the Secondary Provisional Certificate (a) must elect Education 533, 536, 676, and the required special methods courses, and (b) must meet College of Education, and Certification, requirements, pages 53-67, in at least one approved secondary teaching field. Therefore, in planning the 20-hour sequence and free electives he should choose courses which will meet these secondary teaching field requirements.

B. PATTERNS OF SERVICE AND STUDY

		Credit Hours
Autumn, Winter, Spring Quarters		
First year of teaching service in elementary school	Education 518.....	6
	Field seminars or Twilight School courses	9
Summer Quarter.....		16
Autumn, Winter, Spring Quarters		
Second year of teaching service in elementary school	Education 518.....	6
	Field seminars or Twilight School courses	9
Summer Quarter.....		16
NOTE: To complete the requirements for the degree with preparation for teaching in elementary grades only, one additional Quarter of College courses is generally needed.....		
Autumn, Winter, Spring Quarters		
Third year of teaching service	(Optional) Education 536.....	6
	(Optional) Field seminars or Twilight School courses.....	9

For students pursuing the 235-hour program leading to elementary, core, and high school certification, the third year of teaching service must be at the junior or senior high school level. Students qualifying only for elementary certification may continue teaching and student teaching at the elementary level.

Summer Quarter..... 16

NOTE: The "Field Seminars or Twilight School courses" must be chosen with the approval of the student's adviser and may include any or all of the following: (a) professional education courses as listed above under "Required Courses"; (b) general education courses as listed above under "Required Courses"; (c) field seminars related to current teaching experience, not included in the professional education total of 87 hours; or (d) free electives.

REQUIREMENTS FOR A DEGREE

Minimum total required for the Degree Bachelor of Science in Education, including eligibility for four-year Provisional Elementary Teacher's Certificate	214 Quarter hours
Minimum total required for the Degree Bachelor of Science in Education, including eligibility for both Elementary and Secondary Provisional Certificates	235 Quarter hours

SPECIAL PROGRAM FOR TEMPORARY CERTIFICATION FOR TEACHING IN ELEMENTARY GRADES

Because of the teacher shortage, The Ohio State University College of Education is offering an emergency program which leads to an acceptable minimum of competency for temporary certification. Graduates of Colleges of Liberal Arts (and other graduates with an adequate liberal background) who wish to qualify for teaching in public elementary schools may enroll. The Special Program is offered in the Summer Quarter. Applicants who are eligible will enroll in the College of Education for five courses in "Theory and Practice in Elementary Education." These are arranged as follows: Conceptions of Teaching (four hours), Child Guidance (four hours), and three courses in the Teaching of Arithmetic, Language Arts, and Social Studies respectively which are combined in a Workshop (eleven hours) adapted to the needs of, and limited to, this group of Arts College graduates.

The State Department of Education will issue a temporary elementary teacher's certificate, valid for one year, to persons successfully completing the Special Program. The temporary certificate is issued on an individual basis, upon the request of an employing superintendent of schools who is unable to obtain a regularly certificated teacher for a vacant position. Persons completing the Summer Quarter program become available for teaching in September. Those who complete the program for temporary certification may

XI. PROFESSIONAL CURRICULA OTHER THAN TEACHER-EDUCATION IN FINE AND APPLIED ARTS, MUSIC, OCCUPATIONAL THERAPY

FINE AND APPLIED ARTS CURRICULA

In addition to the curriculum in Art Education on pages 71, 72, leading to the degree Bachelor of Science in Education, the School of Fine and Applied Arts offers, at the undergraduate level, curricula leading to the degrees of Bachelor of Arts and Bachelor of Fine Arts.

The curricula leading to the degree of Bachelor of Fine Arts are offered in the College of Education. All of these curricula prepare the student for professional specialization in the art field of the type indicated by the title of the curriculum.

For the curriculum leading to the degree Bachelor of Arts, see the Bulletin of the College of Arts and Sciences or the Bulletin of the School of Fine and Applied Arts.

The total credit requirement for the degree Bachelor of Fine Arts in these curricula is two hundred Quarter hours except in the curricula in Ceramic Art and Medical Art which require two hundred and ten hours.

Complete descriptions and outlines of these curricula will be found in the Bulletin of the School of Fine and Applied Arts, pages 9 to 20. Curricula are offered in the following fields:

PAINTING, SCULPTURE, AND ART HISTORY

This curriculum has the broadest orientation of any offered by the School and is correspondingly less specific in professional emphasis. It is a good curriculum for the student desiring a sound, general preparation for a future in which art will have a significant part.

PAINTING

In this curriculum techniques and the different media are approached for their interrelationships and as a means towards helping the student achieve a more complete and characteristic self-expression in painting. The emphasis is on growth through experience.

SCULPTURE

Majors in sculpture will combine experience in free plastic design with selected sculpture projects in stone, wood, metals, and other materials. The techniques of casting in plaster and metal will be developed and an intensive study made of the relationship of sculpture to architecture, landscaping and the modern interior.

ART HISTORY

The history of art provides an aesthetic focus for the study of man's social and cultural development. Professionally it leads towards the teaching of art history at the university level and towards museum administration and other fields calling for art connoisseurship.

CERAMIC ART

This curriculum is the outgrowth of a need for designers who are trained not only in fundamental art principles but also in the knowledge of ceramic manufacturing methods and the possibilities and limitations inherent in materials and processes. The ceramic program offers the student a foundation in design together with selected basic courses in science and ceramic engineering.

COMMERCIAL ART

The training in commercial art offered by the School of Fine and Applied Arts includes lettering, air brush, advertising design and layout, project presentation and special commercial art problems. The program is correlated with appropriate basic courses in art, economics and business and includes other courses in the University at large which give to the overall curriculum a broad character.

COSTUME DESIGN

This curriculum combines a broad study of the principles of visual organization, as applied in the several media, with a special emphasis on the problems of costume design.

INTERIOR DESIGN

The curriculum in interior design is planned to fit the student for professional practice. Preliminary training is given in the basic art principles. Historic and contemporary interiors are studied in preparation for creative designing. The materials of the art are explored for their characteristics and possibilities. Opportunity is given to solve problems of interior design in buildings in the community.

MEDICAL ART

This curriculum, although administered by the School of Fine and Applied Arts, was developed in consultation with the College of Medicine and comprises a combination of certain disciplines of both areas. The aim is to prepare the student not only for such exacting requirements as histological and surgical illustration but also for general art services to a medical center. In the latter category would be included the presentation of medical exhibits and the preparation of visual aids for the classroom. All student candidates for the medical art curriculum will be screened by a committee composed of faculty members from the College of Medicine and the School of Fine and Applied Arts. The student is asked to present himself to this committee for an interview and to present a portfolio of his work for the committee's consideration during the sixth Quarter of his residence. Students should see the student adviser as soon as they are sure they want to study medical art.

MUSIC CURRICULUM

LEADING TO THE DEGREE BACHELOR OF MUSIC

In addition to the curricula in Music Education on pages 79 to 85 leading to the degree Bachelor of Science in Education, the School of Music offers at the undergraduate level, curricula leading to the degrees of Bachelor of Arts and Bachelor of Music. For the curriculum leading to the degree Bachelor of Arts, see the Bulletin of the College of Arts and Sciences.

Music Curriculum V, which leads to the degree Bachelor of Music, is offered in the College of Education. For requirements for a combination of the two degrees—Bachelor of Music and Bachelor of Science in Education—see “Music—Two Degrees,” page 85 of this Bulletin.

For the special requirements for admission to all curricula in the School of Music, refer to pages 21 and 22 of the Bulletin of the School of Music.

MUSIC CURRICULUM V.

The following curriculum is offered to students who wish to prepare for the B.Mus. in the following special fields of music:

- a. *Applied Music with a major* in Piano, Organ, Voice or Orchestral instrument.

Instruction on the following orchestral instruments will be offered in 1956-1957: Violin, Viola, Violoncello, Contrabass, Flute, Clarinet, Oboe, Bassoon, French Horn, Cornet, Trumpet, Trombone, Baritone Horn, Bass Horn, and percussion instruments.

- b. *Theory.*

- c. *Composition.*

- d. *Choral and Church Music.*

For the complete description of this curriculum the student is referred to the bulletin in the School of Music, pages 44-46.

OCCUPATIONAL THERAPY

The curriculum in Occupational Therapy at the Ohio State University meets the standards of the Council on Medical Education and Hospitals of the American Medical Association and has been fully approved by that organization. Upon completion of the course the student is eligible to write the national examination for admission to the Register of Occupational Therapists maintained by the American Occupational Therapy Association.

ADMISSION

Application should be made to the University Examiner's Office for admission to the University and to the Department of Occupational Therapy, College of Education, for admission to this curriculum.

Candidates for admission must arrange for a personal interview with the chairman of the Department of Occupational Therapy. It will be necessary for an applicant to spend one day on campus to fulfill admission requirements.

Good health is essential and the candidate must possess personal qualifications and aptitudes for the profession. The maximum age for admission is 35, although exceptions may be made in the cases of persons who are particularly well qualified.

Occupational therapy is a specialized field and admission will be granted to those applicants who are best qualified.

APPROVAL OF PROGRAM

Students pursuing the curriculum in Occupational Therapy must secure the approval of the chairman of the Department of Occupational Therapy on each Quarter's schedule before presenting the schedule card at the Registrar's Office.

ADVANCED STANDING

Candidates who have had previous work adequately covering the ground of various courses in the curriculum may be admitted on advanced standing thus materially shortening the training period. Transcripts of such work from other colleges or universities should be submitted to the University Examiner

for evaluation. The length of time required for such students to complete the program is dependent on the amount of transfer credit acceptable as equivalent to or in lieu of regular curriculum requirements. It should be noted that twenty hours of free electives not directly related to the field of occupational therapy are acceptable in this program.

REQUIREMENTS FOR CLINICAL PRACTICE

An average point-hour ratio of 2.25 on all professional courses is required for admission to clinical practice (Occupational Therapy 620). Professional courses include Fine Arts 534, 572, Anatomy 504, 505, Physiology 506, Physical Education 570, Bacteriology 509, Education 585, Psychology 404, 541, 609, 690, Social Administration 510, 603, 647, all Occupational Therapy courses. A grade of "C" or better in Occupational Therapy 620 is required each period.

OCCUPATIONAL THERAPY CURRICULUM

Leading to the Degree Bachelor of Science in Occupational Therapy.

First Quarter			Second Quarter			Third Quarter		
Education Survey	(408)	3	*Sociology	(401)	5	*Sociology	(407)	5
Fine Arts	(431)	5	Zoology	(401)	5	Fine Arts	(485)	5
Chemistry	(407 or 411)	5	English	(417)	3	English	(418)	3
English	(416)	3	Military or Air Science	2	Military or Air Science	2		
Military or Air Science	2		Physical Education	1	Physical Education	1		
Physical Education	1		**Elective	3	*Elective	3		
Physical Education	(400)	1						

* The Sociology sequence may be either Sociology 401-402, 401-407, 401-405, or 401 and Anthropology 501.

** Eight of the twenty-six Quarter hours of electives provided for in this curriculum should be directly related to the field of Occupational Therapy and may include Zoology 402, which is a recommended elective. The remaining eighteen hours of free electives shall be chosen from such fields as History, Political Science, Economics, Philosophy, English Literature, and Mathematics. These shall be so chosen that when taken in connection with required broadening courses, not more than fifteen hours will be from any one field.

Fourth Quarter			Fifth Quarter			Sixth Quarter		
Anatomy	(504)	5	Physiology	(506)	5	Anatomy	(505)	5
Psychology	(401)	5	Psychology	(404)	5	Elective		5
†Home Economics	(514)	3	†Occupational Therapy	(500)	1	Occupational Therapy	(501)	1
Military or Air Science	2		**Techniques Elective	3	Military or Air Science	2		
Physical Education			Military or Air Science	2	Physical Education			
(Women)	1		Physical Education		(Women)	1		
Bacteriology	(509)	5	(Women)	1	Elective	5		
			Elective	3				

** This Techniques Elective may include such courses as Engineering Drawing 400 or 416, Fine Arts 561, Music 401, 402, 403 or 514 or Physical Education 550, 556, and 630.

† Requirement for women students.

Seventh Quarter			Eighth Quarter			Ninth Quarter		
Physical Education	(576)	4	Education	(585)	4	Education	(585)	4
Occupational Therapy	(602)	5	Psychology	(541)	3	Occupational Therapy	(604)	5
Psychology	(609)	3	Social Administration	(647)	3	Fine Arts	(572)	5
Fine Arts	(534)	5	Occupational Therapy	(603)	5	Psychology	(690)	3
			*Home Economics	(507)	2	Elective		3

* Requirement for women.

*Tenth Quarter

Occupational Therapy (620) 6
Clinical Practice in
Occupational Therapy

* The prerequisite for admission to Occupational Therapy 620 is an average point-hour ratio of 2.25 in all required professional courses. The student spends this Quarter gaining practical experience and instruction under direction of the University Department of Occupational Therapy and the immediate supervision of registered therapists in affiliated hospitals. Students attend hospital lectures, conferences, and clinics during this period.

Eleventh Quarter		*Twelfth Quarter	*Thirteenth Quarter
Education	(585) 4	Occupational Therapy	(620) 6
Occupational Therapy	(605) 2	Clinical Practice in	Clinical Practice in
Psychology Elective	3	Occupational Therapy	Occupational Therapy
Social Administration	(603) 3		
Elective	3		
Social Administration	510) 3		

*. These Quarters are spent in completion of the required three Quarters of clinical practice. During this training period the students will move from one affiliated hospital to another so that experience of each will include general, children's, orthopedic, tuberculosis, and psychiatric hospital or service.

Affiliating Centers used include:

Benjamin Franklin Hospital, Columbus, Ohio; Buffalo Children's Hospital, Buffalo, N. Y.; Delaware Curative Workshop, Wilmington, Delaware; Denver Children's Hospital, Denver, Colorado; Hartford Rehabilitation Center, Hartford, Connecticut; Henry Ford Hospital, Detroit, Michigan; Hines Veterans Administration Hospital, Chicago, Illinois; Indiana University Medical Center, Indianapolis, Indiana; Institute for Physical Medicine and Rehabilitation, New York University, New York; Kessler Institute, West Orange, New Jersey; La Rabida Jackson Park Sanitarium, Chicago, Illinois; Leahi Hospital, Honolulu, Hawaii; Menninger Clinic, Topeka, Kansas; Milwaukee County Hospital for Mental Diseases, Milwaukee, Wisconsin; National Jewish Hospital, Denver, Colorado; Nightingale Cottage, Reynoldsburg, Ohio; Norwich State Hospital, Norwich, Connecticut; Northport Veterans Administration Hospital, Long Island, New York; Ohio State University Health Center; Queens Hospital, Honolulu, Hawaii.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Occupational Therapy.

ACCOUNTING

Office, 452 Hagerty Hall

PROFESSORS McCOY, TAYLOR, ECKELBERRY, DICKERSON, AND HECKERT, ASSOCIATE PROFESSORS SHONTING, BURNHAM, JENCKS, DOMIGAN, COX, FERTIG, NOBLE, AND STONE, ASSISTANT PROFESSOR BRUSH, MR. BOLON, MR. HAMPTON, MR. KEMPNER, MR. LYLE, MR. GRIMSTAD, MR. MATTHIES, AND ASSISTANTS.

401-402. Elements of Accounting. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Three class meetings and two two-hour laboratory periods each week. Prerequisite or concurrent, Economics 401-402 or 403-404 or 406 or 507. All instructors.

The work of the first Quarter includes the development of the basic principles underlying bookkeeping procedures; discussion of the techniques and records employed in the recording, classification and summarization of simple business transactions; a treatment of the methods involved in closing the accounting records, including the accountant's work sheet, and preparation of the financial statements; and an introduction to the analysis and interpretation of these statements.

The work of the second Quarter develops the application of the above principles and techniques in the partnership and corporate forms of organization. Manufacturing statements, the voucher system, and problems arising in connection with accounting for cash and commercial paper.

403. Intermediate Accounting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Accounting 401-402. All instructors.

A study of the fundamental accounting principles of valuation and their implications in the preparation of the Balance Sheet and the Income Statement. Special consideration is given to problems in connection with cash, receivables, inventories, investments, fixed assets, liabilities, capital stock and surplus.

405. Outline of Accounting. Five credit hours. One Quarter. Autumn and Winter. Five class meetings each week. Mr. Lyle.

A general survey of the principles of accounting and their applications to modern business. Points emphasized are: use of accounting for information and control; the double-entry theory and the mechanics of bookkeeping; account classification; determination of profits; problems of valuation; presentation and analysis of financial and operating statements. The course is intended for students whose major interest is in fields other than accounting; it will serve, however, as preparation for a limited amount of specialized study in the problems of mercantile manufacturing, and institutional accounting.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

602. Advanced Principles of Accounting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Accounting 403. Mr. Shonting, Mr. Fertig.

A study of the application of basic principles to the accounting problems arising in connection with consignment sales, installment sales, branch house operations mergers and reorganizations, statements for holding companies and their subsidiaries, the dissolution of business units and fiduciary operations.

Not available for graduate credit for students majoring in Accounting.

603-604. Cost Accounting. Four credit hours. Two Quarters. 603, Autumn and Winter; 604, Winter and Spring. Four class meetings each week. Prerequisite, Accounting 403. Not open to students who are taking Accounting 624. Mr. Cox, Mr. Brush, Mr. Noble.

Basic concepts and techniques of industrial accounting to provide data and analyses for cost control and to measure costs of operations and products. Historical and standard costs as applied to job order and process industries. Problems and case studies dealing with managerial use of cost accounting information.

Not available for graduate credit for students majoring in Accounting.

616. Financial Statement Analysis. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Accounting 403. Mr. Bolon.

A study of the flow or movements of funds as reflected in the financial statements. The use of ratios and other indices in the analysis and interpretation of the financial position, together with the trends and variations therein, are considered in detail. The subject matter is developed through lectures and problems supplemented with published financial statements. Each student prepares, under supervision of the instructor, an analysis of the current financial statements of some prominent corporation, together with a comparison with the principal competitors in the field.

Not available for graduate credit for students majoring in accounting.

ADULT EDUCATION

(See Bureau of Special and Adult Education)

AGRICULTURAL BIOCHEMISTRY

Office, 101 Agricultural Laboratories Building

PROFESSORS DEATHERAGE, ALMY, AND BURRELL, ASSOCIATE PROFESSORS VARNER AND WEBSTER, ASSISTANT PROFESSOR MOORE, AND ASSISTANTS

410. General Agricultural Biochemistry. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lecture and discussion periods each week. Prerequisite, Chemistry 412. All instructors.

An introductory course in organic chemistry and its application to plant and animal life.

411. General Agricultural Biochemistry, Laboratory. Three credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour lecture discussion periods, and two two-hour laboratory periods each week. Prerequisite or concurrent, Agricultural Biochemistry 410. Mr. Almy and assistants.

Laboratory work in the application of organic chemistry in plant and animal life including quantitative analysis.

AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY

Office, 208 Townshend Hall

PROFESSORS SMITH, CRAY, HENNING, MANGUS, OYLER, SHERMAN, SITTERLEY, AND WERTZ, ASSOCIATE PROFESSORS BAKER, CAPENER, CRAVENS, MOORE, NEWBERG, AND OLSON, ASSISTANT PROFESSORS ANDREWS, BAUMER, MacCORMICK, SHARP, SHAUDYS, AND WILLIAMS, INSTRUCTORS AND ASSISTANTS.

RURAL SOCIOLOGY

505. Introduction to Rural Sociology. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, sophomore standing. Mr. Mangus, Mr. Andrews, Mr. Oyler.

Principles and practices of living in contemporary rural society. Emphasizes urbanizing influences, personality adjustment, marriage and family living, occupational adjustments, educational problems, and group participation and leadership.

Students who have credit for Sociology 401, 507, or 511 should elect Rural Sociology 606 in place of this course.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

606. Advanced Rural Sociology. Five credit hours. Autumn and Winter Quarters. Prerequisite, five hours of sociology, rural sociology, or the equivalent with permission of the instructor. Mr. Mangus.

A general course in the sociology of rural life. Emphasizes the fundamental and conditioning factors in rural social developments, rural social institutions, and the nature of rural social organization.

AIR SCIENCE

Office, 307 Military Science Building

COLONEL McLENDON AND STAFF

A Senior Unit of the Air Force Reserve Officers' Training Corps is maintained at The Ohio State University. Students may elect Air Science to fulfill the Board of Trustees requirement for Military Instruction. The primary objective of the Air Force ROTC is to develop in students those attributes of character, personality, and leadership required of an officer of the United States Air Force and to encourage interest in the essentials of good citizenship. Students who can qualify physically are eligible to apply for flying training upon graduation and commissioning.

The curriculum in Air Science consists of two main divisions, Basic and Advanced. Basic Air Science is offered during the freshman and sophomore years and meets the requirement established by the Board of Trustees for military instruction of all male students during the first six Quarters of residence. Basic Air Science courses, common to all freshman and sophomore students, provide instruction in Introduction to AFROTC; Introduction to Aviation; Fundamentals of Global Geography; International Tensions and Security Organizations; Military Instruments of National Security; Elements of Aerial Warfare; Careers in the United States Air Force; Basic Military Training.

Advanced Air Science, normally scheduled during the junior and senior years, consists of six Quarters of instruction plus attendance at four weeks of summer camp, scheduled at the end of the junior year. Satisfactory completion of Basic Air Science or its equivalent is a prerequisite to Advanced Course enrollment. Final selection of Advanced students is based on the student's record. Students enrolling in the Advanced course agree in writing to continue in the Air Force ROTC for the remainder of the course, devoting five hours each week to the prescribed training and to attend the required summer camp. An officer type "Air Force Blue" uniform is furnished each student. Advanced course students are paid approximately \$27.00 a month. Transportation, food, clothing, and medical care are provided students attending summer camp. The pay for summer camp duty is approximately \$78.00.

Air Science courses for the Advanced students provide instruction in: Air Force Commander and His Staff; Problem Solving; Communicating in the Air Force; Military Justice System; Weather and Navigation; Air Base Functions; Principles of Leadership and Management; Military Aspects of World Political Geography; Career Guidance; Military Aviation and the Evolution of Warfare; Briefing for Commissioned Service, and Leadership Laboratory.

Students formerly enrolled in the Advanced Course and those in the Basic Course who express interest in and are qualified for Advanced Course enrollment are recommended for military deferment from selective service induction. This deferment is effective until completion of the normal undergraduate course of instruction, provided the student continues his Air Force enrollment and maintains satisfactory academic progress toward graduation.

BASIC AIR SCIENCE (FRESHMEN AND SOPHOMORES)

401-402-403. National Defense and the Air Force. Two credit hours each Quarter. Two hour recitation and one hour Leadership Laboratory. Leadership Laboratory throughout the year in basic military training and fundamentals of drill and ceremonies. Staff.

401. Introduction to AFROTC, Introduction to Aviation. First Quarter students. Autumn, Winter, Spring.

402. Military Instruments of National Security, Fundamentals of Global Geography. Second Quarter students. Autumn, Winter, Spring.

403. International Tensions and Security Organizations. Third Quarter students. Autumn, Winter, Spring.

501-502-503. Elements and Potentials of Air Power. Two credit hours each Quarter. Autumn (501), Winter (502), Spring (503). Two hours recitation and one hour Leadership Laboratory. Leadership Laboratory throughout the year in basic military training and fundamentals of drill and ceremonies, emphasizing responsibilities of the non-commissioned officer. Staff.

501. Fundamentals of a Career in the USAF, Introduction to Aerial Warfare, Weapons.

502. Targets, Aircraft.

503. Aerial Operations, World-Wide System of Air Force Bases.

ADVANCED AIR SCIENCE (JUNIORS AND SENIORS)

Prerequisite to enrollment in the following courses is completion of Basic Air Science or equivalent and acceptance by the Air Force Department as an advanced course student.

601-602-603. The Air Force Officer in the Air Age. Three credit hours each Quarter. Autumn (601), Winter (602), Spring (603). Four hours recitation and one Leadership Laboratory. Leadership Laboratory throughout the year with cadet officers assuming positions of command for parades and ceremonies. Staff.

601. Introduction to Advanced AFROTC, Communicating in the Air Force, Instructing in the Air Force.

602. Air Force Commander and His Staff, Creative Problem Solving, Military Justice System.

603. Air Navigation, Weather, Air Force Base Functions.

701-702-703. Leadership and Air Power Concepts. Three credit hours each Quarter. Autumn (701), Winter (702), Spring (703). Four hours recitation and one hour Leadership Laboratory. Leadership Laboratory throughout the year with cadet officers assuming positions of command for parades and ceremonies. Staff.

701. Principles of Leadership and Management.

702. Military Aspects of World Political Geography.

703. Career Guidance, Military Aviation and the Evolution of Warfare, Briefing for Commissioned Service.

AMERICAN HISTORY

(See History)

ANATOMY

Office, 414 Hamilton Hall

PROFESSORS KNOUFF, BAKER, EDWARDS, AND PALMER, **ASSOCIATE PROFESSORS** GRAVES, LEACH, HAYES, APLINGTON, AND J. EGLITIS, **ASSISTANT PROFESSORS** GERSTEN, McCOY, RUSSELL, ALPERT, AND KAMPFER, **INSTRUCTORS** I. EGLITIS, AND WESTON

504. Elementary Anatomy. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and six laboratory hours each week. Prerequisite, Zoology 401 or equivalent. Zoology 402 is recommended. Required of students in Optometry, Occupational Therapy, Medical Arts, Medical Technology, Dental Hygiene, Nursing, and majors in Physical Education. Others may elect with consent of the instructor. Not open to pre-medical or pre-dental students. Mr. Aplington.

A course dealing with the fundamental principles of anatomy as illustrated by the dissection of the organ-systems of the cat supplemented by frequent demonstrations of human material.

505. Intermediate Anatomy. Five credit hours. Spring Quarter. Two lectures and six laboratory hours each week. Prerequisite, Anatomy 504 or equivalent. Required for and open only to students in Occupational Therapy, Physical Therapy and Medical Art. Others may elect with consent of the instructor. Not open to pre-medical or pre-dental students. Mr. Edwards and assistants.

A course dealing primarily with neuro-muscular anatomy of the human body.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

613. Comparative Anatomy of the Vertebrates. Five credit hours. Autumn Quarter. Two lectures or recitations and six laboratory hours each week. Prerequisite, Zoology 401-402. Mr. Leach.

The basic plan of the vertebrates and their evolution through the lower classes.

616. Developmental Anatomy. Six credit hours. Spring Quarter. Three lectures or recitations and six laboratory hours each week. Prerequisite, Anatomy 619 or its equivalent. Mr. Knouff, Mr. Hayes.

A general consideration of gametogenesis, fertilization, and germ layer formation followed by a more detailed survey of organogenesis in the pig and human.

619. Comparative Anatomy of the Vertebrates. Five credit hours. Winter Quarter. Two lectures or recitations and six laboratory hours each week. Prerequisite, Anatomy 613 or equivalent. Mr. Leach.

Morphology of mammals, including man, from the point of view of their structural evolution.

ANTHROPOLOGY

(See Sociology and Anthropology)

ARCHITECTURE AND LANDSCAPE ARCHITECTURE

Office, 106 Brown Hall

PROFESSORS WHITAKER AND SUTTON, LECTURER PACKARD

ARCHITECTURE

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

703. Historical Analysis. Two credit hours. Spring Quarter. Mr. Sutton. An introductory study of the theory and practice of city and regional planning. Not open to students who have credit for Architecture 666.

LANDSCAPE ARCHITECTURE

500. Appreciation of Landscape Design. Two credit hours. Spring Quarter. Two lectures each week. Open to any student not majoring in Landscape Architecture. No prerequisite. Mr. Tobey.

A survey course that is arranged especially for those who wish to gain a better understanding and appreciation of design as applied to out-of-door areas.

***507. History of Landscape Architecture.** Three credit hours. Autumn Quarter. Three lectures each week. Given in alternate years. Mr. Sutton.

An historical study of landscape design for professional and non-professional students. The course covers the development of landscape design in the Mediterranean Countries through the period of the Italian Renaissance. Illustrated lectures, class discussions, collateral reading, and a report.

Not open to students who have credit for Landscape Architecture 542.

550. Arrangement and Planning of Gardens and Small Properties. Five credit hours. Autumn Quarter. Two lectures and nine laboratory hours each week. Mr. Tobey.

A course in landscape design for the non-professional student emphasizing the design, construction and planting of small properties.

Open to any student not majoring in Landscape Architecture.

ART

(See Fine Arts)

(See Fine and Applied Arts)

ASTRONOMY

(See Physics and Astronomy)

* Not given in 1956-1957.

BACTERIOLOGY

Office, 210 Pharmacy and Bacteriology Building

PROFESSORS BIRKELAND, HUDSON, DODD, STAHLY, WEISER, FERGUSON, STARIN (EMERITUS), WHEELER, AND WOOLPERT, ASSOCIATE PROFESSORS RANGLES, RHEINS, RIDDLE, AND SASLAW, ASSISTANT PROFESSORS BALDWIN AND BOHL, INSTRUCTOR MALANEY AND LECTURER BOLE

509. Microbiology in Relation to Man. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class periods each week. Prerequisite, ten hours of natural science. Mr. Birkeland, Mr. Randles, and assistants.

A general course designed to acquaint the student with and give him a better understanding of the various activities of microorganisms which have a bearing on the physical and economic well-being of man. It deals with the nature of bacteria and their relationship to food preparation and preservation, soil fertility, sanitation, public health, and diseases of man, animals, and plants.

Not open to students who have credit for "600" courses in Bacteriology.

This course may not be taken concurrently with Bacteriology 607.

Not recommended for students who intend to take other courses in Bacteriology.

550. General Bacteriology. Five credit hours. Spring Quarter. Three class periods and three two-hour laboratory periods each week. Prerequisite, fifteen hours of chemistry and ten hours of biological science. Mr. Stahly, Mr. Weiser, Mr. Baldwin.

The lectures deal with the morphology, classification and physiology of microorganisms. The relation of microbial physiology to problems of soil, dairy, food, and sanitation is discussed. The laboratory provides exercises in staining, observing, culturing, and identifying microorganisms.

Not open to students who have credit for Bacteriology 509 or 607.

Not open to students majoring in bacteriology.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores; they are open to advanced undergraduate and graduate students only. Prerequisite, fifteen hours of chemistry and ten hours of a biological science.

Bacteriology 607 is a prerequisite to all elective "600" courses in the department and is designed to prepare for special work.

607. General Bacteriology. Five credit hours. One Quarter. Autumn, Winter, Spring. Three class periods and three two-hour laboratory periods each week. May not be taken concurrently with Bacteriology 509. Mr. Stahly, Mr. Weiser, Mr. Randles, Mr. Baldwin, Mr. Malaney, and assistants.

The lectures consider the morphology, physiology, and classification of bacteria as well as some of their applications to everyday processes. The laboratory work provides experience in preparing media and in staining, observing, culturing, isolating, and identifying microorganisms.

Not open for graduate credit to students majoring in bacteriology.

Not open to students who have credit for Bacteriology 550.

608. Introduction to Pathogenic Bacteriology. Three credit hours. Winter Quarter. Three class periods each week. Not recommended for pre-medical students. Prerequisite, Bacteriology 550 or 607. Mr. Birkeland, Mr. Rheins.

A general course designed to acquaint students with those bacteria causing disease in man; their habitats and modes of transmission, and an elementary consideration of the immunological processes involved. Designed primarily for students who desire a general knowledge of the field and not for students majoring in bacteriology.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

BOTANY AND PLANT PATHOLOGY

Office, 102 Botany and Zoology Building

PROFESSORS MEYER, SAMPSON, BLAYDES, ALLISON, YOUNG, TAFT, WILSON, ALEXANDER, GRAY, AND WOLFE, ASSOCIATE PROFESSORS WALLER, SWANSON, POPHAM, PADDOCK, AND BOHNING, ASSISTANT PROFESSORS LAMPE, JONES, WEISHAUP, AND SCHMITTHENNER, MR. HUMPHREY, MR. ELLETT, MR. GILBERT, MR. TROXEL, MR. SCHMITT, MR. PLATT, AND ASSISTANTS

401. General Botany. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitation periods each week. Staff and assistants.

Plants as living organisms and as constituting a variously interrelated part of man's environment. Basic processes and structures in green plants; their relations to factors in the environment, to the development of the various organs of a plant, to plant behavior, to the existence of non-green plants and animals, and to the special energy and material needs of man. Frequent comparison of processes in plants with those in man. A continuing acquirement and application of scientific procedures through observations and discussions. No lectures.

402. General Botany. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitation periods each week. Prerequisite, Botany 401. Staff and assistants.

A continuation of Botany 401 enriched by an ever broadening background of processes and interrelations. Reproduction in plants, the basic processes in heredity, heritable and non-heritable variations in plants (their causes, manner of occurrence, consequences, and the advantages man takes of them), the biological and economic relations of non-green plants, the various types of plants, the vegetation of a continent, plants in relation to conservation.

406. Local Flora. Five credit hours. Spring Quarter. Two lecture and six laboratory hours and field work each week. Prerequisite, Botany 401-402. Mr. Waller, Mr. Humphrey, Miss Weishaupt.

A laboratory, field, and lecture course in identifying plants common in Ohio. Emphasis is placed on the use of keys and manuals and on learning to recognize plants in the field. Several off-campus Saturday field trips are included.

419. General Plant Pathology. Five credit hours. One Quarter. Autumn and Spring. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 401-402. Mr. Ellett, Mr. Troxel.

An introduction to the diseases of cultivated plants. The nature, importance, causes, symptoms, classification, and control of plant diseases; the life histories of pathogenic organisms, and effects of the environment, cultural practices, and heredity of the host plants upon the prevalence of disease.

Not open to students who have credit for Botany 422.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

601. Plant Ecology. Five credit hours. Autumn Quarter. Three lectures and one three-hour laboratory period each week. Prerequisite, Botany 401-402 and four additional Quarters of biological science. Mr. Wolfe.

Patterns of vegetation, local, regional and continental; historic, climatic, soil, and basic factors that limit the various plant communities. Lectures, discussions, and laboratory work, on tundra, boreal forest, hemlock-hardwood, and deciduous forest. Field study of Ohio plant communities and their successions. Several extended Saturday field trips.

602. Plant Ecology. Five credit hours. Spring Quarter. Three lectures and one three-hour laboratory period each week. Prerequisite, Botany 601. Mr. Wolfe.

Continuation of Botany 601. The forest, grassland, and desert vegetation of western North America. Lectures, reference reading and laboratory work. Further study of Ohio plant communities. Several extended Saturday field trips.

605. Plant Physiology. Five credit hours. One Quarter. Autumn and Winter. Three lecture and two two-hour laboratory periods each week. Prerequisite, Botany 401-402 and two Quarters of chemistry. Mr. Meyer, Mr. Swanson, Mr. Bohning, Mr. Platt.

A fundamental course in plant physiology; solutions, colloidal systems, cell physiology, diffusion phenomena, osmotic quantities, permeability, transpiration, absorption and movement of water, photosynthesis.

606. Plant Physiology. Five credit hours. One Quarter. Winter and Spring. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 605. Mr. Meyer, Mr. Swanson, Mr. Bohning, Mr. Platt.

Continuation of Botany 605; photosynthesis, synthesis of carbohydrates, fats, and nitrogenous compounds, absorption and utilization of mineral salts, digestion, transmission of solutes, respiration, growth, reproduction, dormancy.

613. Bryophytes, Pteridophytes, and Gymnosperms. Five credit hours. Winter Quarter. Four two-hour laboratory-discussion periods each week. Prerequisite, Botany 401-402 and two additional Quarters of biological sciences. Given in alternate years. Miss Lampe.

A study of the comparative structures and life histories of the liverworts, mosses, ferns, and conifers. Hereditary variations in form and structure within and among these groups during geologic time; world distribution and habitats of fossil and living genera.

614. Morphology of the Angiosperms. Five credit hours. Autumn Quarter. Four two-hour laboratory-discussion periods each week. Prerequisite, Botany 401-402 and two additional Quarters of biological sciences. Mr. Blaydes.

The basic principles of the reproductive mechanism in angiosperms and their application to problems in genetics, plant breeding and crop production.

615. Plant Microtechnic. Five credit hours. Winter Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisite, Botany 401-402 and two additional Quarters of biological sciences. Mr. Blaydes.

Principles and methods of fixing, imbedding, sectioning, and staining of plant tissues for permanent microscopic preparations. Opportunity is given for preparing a collection of microscope slides suitable for use in teaching. Students having research materials may use them in making microscopic preparations.

619. Economic Botany. Five credit hours. Winter Quarter. Five lectures each week. Prerequisite, Botany 401-402 and two additional Quarters of biological science or two Quarters of geography. Mr. Waller.

The plant sources of sugars, fats, proteins, fibers, rubber, and wood products. Related problems of production and distribution are illustrated and discussed. Field trips to distributing centers are scheduled when possible.

635. Plant Genetics. Five credit hours. Autumn Quarter. Three recitations and two two-hour laboratory periods each week. Prerequisite, Botany 401-402 and Zoology 403 or 603. Mr. Paddock.

The role of lethals, linkage, and heterogeny, isolation, introgression, polyploidy, apomixis, translocation, and cytoplasmic inheritance in evolution. Laboratory experience with acetocarmine smears, colchicine, progeny tests, random number tables, and herbarium specimens.

640. Developmental Plant Anatomy. Five credit hours. One Quarter. Winter and Spring. Four two-hour laboratory-discussion periods each week. Prerequisite, Botany 401-402 and two additional Quarters of biological sciences. Mr. Popham.

The initiation, differentiation and development of tissues, tissue systems and organs of vascular plants, and a comparative study of the various structures. This course is a desirable antecedent to advanced work in plant physiology, pathology, and morphology.

671. Plant Pathology. Five credit hours. Winter Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 401, 402, fifteen additional hours of biological science and permission of the instructor. Mr. Troxel, Mr. Ellett.

A course in plant pathology emphasizing general principles of plant disease development and control for students with a considerable background in the biological sciences. A number of representative plant diseases will be studied.

Not open to students who have credit for Botany 710.

Not open to students majoring in plant pathology.

701. Special Problems. One to five credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, Botany 401-402 and two additional Quarters of some biological subject. The staff.

Problems may be selected in the field of Taxonomy, Morphology, Anatomy, Algology, Physiology, Ecology, Genetics, Cytology, Plant Pathology, and Mycology.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 683.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

BUREAU OF EDUCATIONAL RESEARCH

Office, 203, 204 Arps Hall

PROFESSORS FOSHAY (DIRECTOR), DALE, ECKELBERRY, W. FLESHER, HERRICK, HOLY (DIRECTOR EMERITUS), MOONEY, K. TYLER, AND WOELFEL, ASSOCIATE PROFESSORS CONRAD, MacLATCHY, AND SESSIONS, ASSISTANT PROFESSORS M. FLESHER, REYNARD, M. TYLER, WILLIAMS, AND WOHLERS, MISS GIBBONY, MISS JACOBS, MISS SEEGER, MISS VESEY

The major purpose of the Bureau of Educational Research, which was organized in 1921, is to promote the scientific investigation of educational problems in the College, in the University, and in the public schools of the state. An important step to facilitate the Bureau's work was taken when the Board of Trustees, on October 11, 1942, authorized the President of the University to assign staff members from other departments in the University to the Bureau for full- or part-time services to carry on approved investigations.

Service: In addition to its research and field-service functions, the Bureau maintains a number of service agencies and activities of value to students: Division of Appointments (educational placement office), Reference Library, Teaching Aids Laboratory, and Curriculum Materials Center.

Library: The Reference Library contains large quantities of material in the form of manuscripts, pamphlets, bulletins, reports, and educational periodicals. The services of the reference librarian in charge are available to students. She will assist in the preparation of bibliographies and advise of any phases of library research. Included in this Library is an Educational and Psychological Test File.

Research Problems: According to the nature and character of the problem and the scholastic status of the student, he may work with members of the Bureau in the following:

- Minor Problems. One to four credit hours. Investigation of minor problems.
- Education 600
- Psychology 650

Courses: In order to make the resources of the Bureau serve their purposes, students desiring to work in the Bureau may register in certain courses listed in the Department of Education and Psychology. Such students will be under the direction and supervision of Bureau Staff members. Courses given by members of the Bureau Staff are as follows:

600. Minor Problems

- (D) Guidance. Mr. Mooney.
- (F) History of Education and Comparative Education. Mr. Eckelberry.
- (J) Radio and Television Education. Mr. Tyler.
- (K) Secondary Education. Mr. Eckelberry.
- (M) Educational Administration. Mr. Flesher, Mr. Herrick, Mr. Sessions.
- (S) Audio-Visual Materials of Instruction. Mr. Dale, Miss Williams, Mr. Woelfel.
- (V) Research Techniques. Mr. Dale, Mr. Flesher, Mr. Mooney, Mr. Woelfel, Mr. Foshay.

601. Radio and Television Education. Mr. Tyler.

602. Audio-Visual Materials of Instruction. Mr. Dale, Mr. Woelfel.

NOTE: Description of courses and prerequisites will be found under department announcements.

BUREAU OF SPECIAL AND ADULT EDUCATION

Office, 321 Arps Hall

PROFESSORS NISONGER, SANDERSON, AND HENDRICKSON, ASSOCIATE PROFESSORS ROSEBROOK AND CASSIDY, ASSISTANT PROFESSORS PHELPS AND HUNT, AND ASSISTANTS.

The Bureau of Special and Adult Education is concerned with the development of educational programs for all types of exceptional children and for adults. Among its major responsibilities are:

- a. Working with the various departments in the University in the development of professional training programs which will furnish trained personnel in Special and Adult Education.
- b. Providing consultant services to schools and communities which will assist them in establishing and maintaining their local programs of Special Education and Adult Education.
- c. Carrying on research in Special Education and in Adult Education.

SPECIAL EDUCATION

Teacher Education: Opportunities for professional training in Special Education are available to qualified graduate and advanced undergraduate students interested in the problems of identification, diagnosis, treatment, counseling, education, placement, and follow-up of exceptional children. Students will have an opportunity to become familiar with the educational needs of different types of exceptional children such as mentally handicapped, crippled, defective in speech, children with behavior problems, children who are educationally retarded, and the gifted.

Students planning to prepare themselves in Special Education should proceed as follows:

1. Consult with members of the staff of the Bureau of Special and Adult Education concerning interests and plans. This should be done not later than the end of the freshman year.
2. If enrolled in Elementary Education, consult with the adviser in program planning in order to include twenty hours in Special Education. If appropriate courses are elected with a point hour ratio of at least 2.25 on the total group, regular certificates in elementary Education will be validated for teaching slow-learning children.
3. If enrolled in secondary education, consult with the adviser and plan to elect sufficient hours for a teaching minor in Special Education. If appropriate courses are taken, regular certificates in Secondary Education will be validated for teaching slow-learning children.

RECOMMENDED COURSES IN SPECIAL EDUCATION

(Starred Courses Required)

Psychology	408	Mental Hygiene	3
Psychology	507	Genetic Psychology	5
Psychology	508	Quantitative Methods in Psychology.....	5
Psychology	521	Social Psychology	3
*Education	537L	Supervisor Practice in Specialized Forms of Education.....	4-15
Psychology	541	Psychology of Abnormal Behavior.....	3
Psychology	605	Physiological Psychology	3
*Psychology	609	Exceptional Children: (General Survey).....	3
Psychology	610	Adolescence	3
Psychology	611	Intellectual Deviate.....	3

Psychology	613	Mental and Educational Tests.....	3
Psychology	422	Delinquent Children	3
Psychology	631	Nature and Appraisal of Individual Differences.....	3
Psychology	683	Psychology of Reading.....	3
Psychology	695	Clinical Psychology	3
*Speech	504	Speech Functions and Responsibilities of the Teachers.....	3
Speech	580	Bases of Speech Production.....	5
Speech	682	Hearing Conservation and Pathology.....	3
Education	585	Industrial Arts and Crafts.....	4
Education	587	Supervised Practice in Specialized Form of Education.....	7
*Education	666	Introduction to the Education of the Mentally Retarded.....	3
Education	667	Methods of Dealing with Exceptional Children in Schools.....	3
Education	668	Methods and Techniques in Speech and Hearing Therapy.....	5
Education	764	Supervised Teaching in Special Classes.....	3
Education	766	Principles and Methods of Teaching Behavior Problem Children..	3
*Education	773	Practicum in Program Planning for Slow Learning Children....	3
Sociology	600	The Modern Family.....	4
Social Administration	510	Introduction to Rehabilitation.....	3

Field Service: In cooperation with the Division of Special Education of the State Department of Education, the State Department of Health and Welfare, and state and local organizations, the Bureau of Special and Adult Education provides consultant services to assist schools and institutions as follows:

1. In organizing child study and school psychological programs.
2. In exploring state and local resources for diagnosis, treatment and training of exceptional children.
3. In surveying needs for Special Education.
4. In establishing new programs for different types of exceptional children.
5. In developing in-service training programs for teachers.
6. In interpreting the needs of exceptional children to parents.

Opportunities are available for students to secure supervised experience in all areas of Special Education.

ADULT EDUCATION

Teacher Education. By combining specific courses in the field of adult education with selected courses from related fields the Bureau offers a graduate program of training for those intending to teach adults or to administer adult education programs. Workers with adults in group work agencies, public schools, colleges and universities, churches, labor organizations and in rural agencies may, upon approval, enroll for one or more courses or may take a full program leading to the M.A. or Ph.D. degree with a major or minor in adult education.

Field Service: The aims of field service are as follows: to aid in the organization of adult study groups; to assist organized groups in formulating programs of study; to prepare and issue courses of study, bulletins and other materials for the use of adult groups; and to cooperate with state and local organizations in furthering the work of adult education.

University Courses. Students interested in taking work in adult education may enroll in any of the following courses:

- Education 600-B. Minor Problems
- Education 770. Adult Education
- Education 771. Parent Education
- Education 774. Discussion Methods in Adult Education
- Education 800-B. Seminar in Adult Education
- Education 888. Planning Community Adult Education Programs
- Education 950-B. Research in Education
- Psychology 670. Psychological Problems of Adult Life
- Social Administration 830. Community Organization *

Other courses into which students working toward a degree may be scheduled by their advisers include Education 601, Education 602, Psychology 608, Psychology 679, Psychology 850, Sociology 678, Sociology 899.

NOTE: Descriptions of the courses listed above will be found under the department announcements, with the exception of those at the 800 or 900 level which are described in the Graduate School Bulletin only. See College of Agriculture Bulletin for Agricultural Extension 501 and 600.

BUSINESS ORGANIZATION

Office, 352, 354 Hagerty Hall

PROFESSORS MAYNARD, WEIDLER, HOAGLAND, DICE (EMERITUS), VAN CLEEF, DUFFUS, BECKMAN, R. C. DAVIS, REEDER (EMERITUS), SMART, DEWEY, DONALDSON, JUCIUS, LEY, DAMERON, AND BARTELS, ASSOCIATE PROFESSORS CORDELL (EMERITUS), BICKLEY, J. H. DAVIS, RIDDLE, CRAIG, TUTTLE, HEALEY, HICKS, DAVIDSON, MINER, QUANTIUS, AND ALLEN, ASSISTANT PROFESSORS STEELE, CULLMAN, HOWELL, PFAHL, BONNER, MARLOWE, MOECKEL, VELMAN, SCHLENDER, HAUKE, AND HACKETT, INSTRUCTORS MR. JENKINS, MR. STOCKTON, MR., BUZZELL, MR. COX, AND MR. CASEY, LECTURERS AND ASSISTANTS

401. Introduction to Business. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lecture, problem, and discussion hours each week. Open only to Freshmen and Sophomores. Mr. Miner and others.

This course is designed to introduce students to the field of business. A description of the functions and structure of modern business is presented and cases are introduced which give the student a background of information and help to prepare for advanced courses.

504. Business Communications. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507, and junior standing. Mr. Bartels, Mr. Hicks, Mr. Cox, Mr. Casey.

Principles of writing in business letters and reports and internal communications. Selling, buying, collecting, adjusting, credit granting, etc., by mail.

510. Secretarial Work. Five credit hours. One Quarter. Autumn and Winter. Three class meetings and two laboratory periods each week. Open only to majors in the Curriculum in Secretarial Service and Business Education. Prerequisite, Economics 402 or 404 or 406 or 507, Education 403, and 406. Mr. Hicks.

The theory and practice of secretarial fundamentals; procedures and techniques of secretarial work; duties and responsibilities of the secretary with respect to business letters, forms and reports; secretarial ethics.

520. Radio Station Management. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507, and junior standing. Mr. Cullman.

Problems and procedures in the business management of radio stations. Station organization. Physical layout. Production department; programs, announcing, continuity, public relations. Sales department. Personnel. Station accounting. Small station problems. Legal requirements and limitations. Industry relations. New developments.

551. Personal Finance. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Donaldson, Mr. Pfahl.

A course in finance from the viewpoint of the individual. Deals with the principles and practices involved in buying on credit, borrowing money, saving money, bank relationships, buying government bonds, insurance, annuities, real estate, corporate bonds and stocks, and problems of taxation and wills.

Not open to students who have credit for or who are taking Business Organization 655.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

621. Business Law: Contracts. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Craig, Mr. Marlowe, Mr. Howell, Mr. Velman.

A course in the law of contracts for the student of business, including the study of the fundamentals of locally binding agreements between persons, and their enforcement.

Not available for graduate credit for students majoring in Business Organization or Accounting.

623. Business Law: Agency, Sales, Property. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 621. Mr. Marlowe, Mr. Howell, Mr. Velman.

A study of selected, fundamental principles in the subjects named, deemed important to the student of business.

Not available for graduate credit for students majoring in Business Organization or Accounting.

625. Business Law: Negotiable Instruments. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 621. Mr. Craig, Mr. Howell.

A course in the laws governing bill of exchange, promissory notes and checks designed to guide the business man in his daily transactions with such instruments.

627. Business Law: Partnerships and Corporations. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 621. Mr. Craig.

A course designed to give the student of business a practical working knowledge of important laws governing the formation and operation of partnerships and corporations.

640. Corporate Organization and Control. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Donaldson, Mr. Hoagland.

Types of business enterprise; the corporation; rights, duties, obligations and liabilities of stockholders, directors, and officers.

650. Corporation Finance. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507, and Accounting 402 or 405. Mr. Hoagland, Mr. Duffus, Mr. Riddle, Mr. Pfahl.

Financial structure and problems of modern business corporations.

Not open to students who have credit for Economics 616.

676. Principles of Management. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 402 or 404 and Accounting 402. Mr. Healey, Mr. Hicks, Mr. Schlender, Mr. Stockton.

An intensive examination of the basic fundamentals of organization and management underlying the solution of managerial problems. While specifically directed towards the production organization, consideration will be given to other types of business.

Not available for graduate credit for students majoring in business organization.

Not open to students who have credit for Business Organization 680.

685. Purchasing, Stores, and Inventory Control. Three credit hours. One Quarter. Autumn and Spring. Three class meetings each week. Prerequisite, Business Organization 677. Mr. R. C. Davis, Mr. Healey.

An examination of the objectives, principles, and methods that enter into the work of managing the functions of supply in industry. Considers various problems including those relating to the planning of materials requirements, purchasing, receiving, storing and disbursing.

686. Personnel Organization and Management. Four credit hours. One Quarter. Autumn and Winter. Four class meetings each week. Prerequisite, Business Organization 676. Mr. Jucius, Mr. R. C. Davis, Mr. Schlender.

An examination of the staff work required in planning, organizing, and controlling the personnel functions in the business organization, as well as the personnel responsibilities of the line executive. Presents basic principles and procedures relating to employment, industrial health and safety, labor relations and morale, employee education and training, wage and salary administration.

Not open to students who have credit for Business Organization 689.

687. Production Organization and Management. Four credit hours. One Quarter. Autumn and Winter. Four class meetings each week. Prerequisite, Business Organization 677. Mr. R. C. Davis, Mr. Stockton.

An examination of the staff function of production control and its relations with the line organization of the manufacturing division; the coordination of production with sales and finance; the coordinating of various technical staff services with the requirements of the line function of production; routine planning, scheduling and other control functions as they enter into interdepartmental coordination within the line organization; case problems; illustrating the application of control principles.

689. Retail Personnel Organization and Management. Three credit hours. Winter Quarter. Prerequisite, Business Organization 676 and 705. Mrs. Allen, Mr. Jucius.

This course examines the personnel management problems of executives in modern retail business. It considers management's responsibilities for an effective and proper use of its human resources, and the methods that it uses in analyzing its personnel problems, as well as the techniques employed in selecting, training, transferring, promoting, and dismissing members of the organization, controlling wage and salary adjustments, handling grievances, and performing other personnel duties.

Not open to students who have credit for Business Organization 686.

700. Marketing. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Beckman, Mr. Bartels, Mr. Miner, Mr. Moeckel, Mr. Hauk.

A general but critical survey of the field of marketing. Consumer demand in relation to the marketing machinery. Functions, methods, policies, marketing costs, and problems of the farmer, manufacturer, wholesaler, commission merchant, broker, retailer, and other middlemen. Emphasis on principles, trends, and policies in relation to marketing efficiency.

703. Business Research. Three credit hours. One Quarter. Autumn and Spring. Two lectures and one two-hour laboratory period each week. Prerequisite, Business Organization 650, 676, and 700, Economics 522, and permission of the instructor. Mr. Miner.

Business research treated from the viewpoint of the business executive. The course deals with the discovery and utilization of existing information relating to problems of analysis other than accounting. It also includes a study of the fundamentals of primary data research, sampling, and schedule construction. Principles and practice of effective research writing are stressed throughout.

704. Marketing Research. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 522 and Business Organization 700. Mr. Miner, Mr. Moeckel.

Nature, scope, functions, and organization of marketing research. Sources and types of available data useful in the solution of marketing problems. Procedures and methods in the field investigation including a study of sampling fundamentals, schedule construction, data collection, tabulation and analysis, and interpretation and presentation of research findings.

705. Retailing. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Business Organization 700 and Accounting 402 or 405. Mr. Davidson, Mr. Maynard.

A consideration of the organization and management of retail establishments; store location; store organization; buying; receiving; stockkeeping; inventories; sales systems; store policies; services; deliveries; expenses and profits personnel problems, etc.

706. Wholesaling. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Business Organization 700 and Accounting 402 or 405. Mr. Beckman, Mr. Davidson, Mr. J. H. Davis.

Wholesaling. Nature, history, institutional composition, competitive factors, economic and governmental aspects scientific management of wholesale establishments, including functions of sales, internal operation, and operating expense control.

709. Credits and Collections. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Business Organization 700 and Accounting 402 or 405. Mr. Beckman, Mr. Bartels, Mr. Miner.

Nature, instruments, and place of credit in the economy. Management of the consumer, mercantile, and bank credit. Analysis of credit risk. Management of collections. Credit control.

712. Sales Management. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Business Organization 700 and 676, and Accounting 402 or 405. Mr. Maynard, Mr. J. H. Davis, Mr. Cullman, Mr. Hauk.

This course deals with the functions of the sales manager. Principal topics considered are: sales organization; planning, quotas and territories; selecting, training, and compensating salesmen; stimulation and supervision; and the use of the cost data as a guide to the formulation of sales policies.

713. Salesmanship. Two credit hours. One Quarter. Autumn and Spring. Prerequisite, Business Organization 700. Mr. Maynard, Mr. Bonner.

Effective selling technique. The psychological, economic, and marketing foundations of the sales activities which are the basis of the daily work of the salesman. The material considered is designed to be of value to students throughout the University as well as those majoring in marketing or commercial education.

Not available for graduate credit for students majoring in Business Organization.

716. Principles of Advertising. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Business Organization 700. Mr. Cullman, Mr. Moeckel.

A survey course treating advertising from the management viewpoint. Includes consideration of the advertising agency, advertising research, evaluation of media, principles of preparation of advertisements, and economic and social effects of advertising.

717. Advertising Copy and Layout. Three credit hours. One Quarter. Autumn and Winter. Two discussions and one two-hour laboratory period each week. Prerequisite, Business Organization 716. Mr. Dameron, Mr. Moeckel.

Principles and practices in preparation of copy and layout with emphasis on newspapers, magazines and direct mail. Laboratory assignments based on current advertising problems.

718. Broadcast Advertising Media. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Business Organization 716. Mr. Cullman.

Broadcast media from the viewpoints of the advertiser and the station. Emphasis is given to the problems of choosing television and radio stations, times and programs. Writing and evaluating commercials and continuity are included. The role of broadcasting institutions in the community is considered.

725. Field Work in Business Organization. One to three credit hours. All Quarters. May be repeated for an over-all credit of not more than six credit hours. Open only to students in positions for which advance approval has been given.

This course is open to students temporarily not in residence who hold internships which give them valuable pre-graduation experience. The student is required to submit a report covering certain of the problems of the company by which he was engaged during the period of employment. The student must include this course with the appropriate number of credit hours on his schedule card for the Quarter immediately following the one during which this internship was served.

Internships may be approved in the following fields of business enterprise:

- (a) Corporation Organization and Finance. Mr. Hoagland and others.
- (b) Real Estate. Mr. Bonner.
- (c) Insurance. Mr. Bowers, Mr. Ley, Mr. Bickley.
- (d) Marketing. Mr. Maynard, Mr. Beckman, and others.
- (e) Banking. Miss Quantius.
- (f) Industrial Management. Mr. R. C. Davis and others.
- (g) Personnel Management. Mr. Jucius and others.
- (h) Transportation and Public Utilities. Mr. Duffus.
- (i) Advertising. Mr. Cullman, Mr. Moeckel.

(j) Retailing. Mr. Davidson and others.

(k) Secretarial Service. Mr. Hicks.

Not open for graduate credit.

CERAMIC ENGINEERING

Office, 126 Lord Hall

PROFESSORS CARRUTHERS, KING, BLAU, EVERHART, RUSSELL, AND KOENIG,
ASSISTANT PROFESSOR SHEVLIN

401. Introduction to Ceramics. Four credit hours. Winter Quarter. Four lectures each week. Mr. Russell.

An introduction to ceramic fundamentals including geologic processes, the nature of clay and other ceramic materials, basic manufacturing processes, colloidal phenomena, and ceramic reactions. The various ceramic industries and their historical backgrounds are considered.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

750. Special Problems. One to seven credit hours. Autumn, Winter, and Spring Quarters. Conference, library and laboratory work. Prerequisite, fundamental ceramic engineering courses and consent of department. This course may be repeated for different problems or continuation of original problem, with total credit not to exceed fifteen hours. All instructors.

This course is designed to permit any properly qualified student to avail himself of the library and laboratory facilities of the department for carrying on a special investigation or for adding to his knowledge and technique in some ceramic subject.

CHEMICAL ENGINEERING

Offices, 179, 180 McPherson Chemical Laboratory

PROFESSORS KOFFOLT, HERNDON, KAY AND SYVERSON, ASSOCIATE PROFESSORS GEANKOPLIS, AND DRYDEN, RESEARCH ASSOCIATE PROFESSORS KERR AND KRUMIN, ASSISTANT PROFESSOR E. E. SMITH, RESEARCH ASSISTANT PROFESSOR SHEETS, LECTURER CHRISTIANSEN, MR. FREEH, MR. SASHIHARA, MR. LINDSEY, MR. SCHARF AND ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

691. Elements of Chemical Engineering. Three credit hours. Winter Quarter. Two lecture-recitation hours and one two-hour computational laboratory period each week. Prerequisite, differential and integral calculus and one year of college physics, except with special permission of the instructor. Mr. Syverson, and assistants.

The beginning of a thorough discussion of the engineering operations utilized in the chemical branch of engineering with emphasis on the engineering requirements of the market and economics and of the process and their effect on the engineering used. The work of this course is concerned with graphical chemical engineering methods and the study of the behavior of liquids and gases statically, during compression, and in flow. It is directed toward a study of the fundamental principles involved, the engineering equipment available, and by means of numerous computational problems, the quantitative relationships most frequently encountered in chemical industry.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

Not available for graduate credit for students majoring in chemical engineering.

692. Elements of Chemical Engineering. Three credit hours. One Quarter. Autumn and Spring. Two lecture-recitation hours and one two-hour computational laboratory period each week. Prerequisite, differential and integral calculus and one year of college physics, except with special permission of the instructor. Mr. Dryden, Mr. E. E. Smith, and assistants.

A continuation of the study of the chemical engineering operations. The work of this course covers the applications of the basic principles of heat transfer to equipment design and operation problems of chemical industry. It is integrated with fluid flow work of Chemical Engineering 491. Emphasis is laid on computational problem work.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

Not available for graduate credit for students majoring in chemical engineering.

***703. Inspection Trip to the East.** Two credit hours. One week between the Winter and Spring Quarters in even-numbered years. Chemical Engineering, fourth and fifth years. Prerequisite, fourth or fifth year standing or the permission of the instructor. Mr. Koffolt.

The trip includes Akron and Cleveland, Ohio; Rochester and New York, N. Y.; Grasselli and Deep Water Plain, New Jersey; Wilmington, Del.; Baltimore and Curtis Bay, Maryland; and Washington, D. C. The entire expense need not exceed \$90.00. A satisfactory written report upon the work of the trip is required. Fourth-year student emphasis is confined to engineering operations.

Elective for students in the Colleges of Arts and Education and in the Graduate School.

***704. Inspection Trip to the West.** Two credit hours. One week between the Winter and Spring Quarters in odd-numbered years. Chemical Engineering, fourth and fifth years. Prerequisite, fourth or fifth year standing or special permission of the instructor. Mr. Koffolt.

The trip includes Dayton, Hamilton, Cincinnati, and Ivorydale, Ohio; Kensington, Ill.; Grasselli and Whiting, Ind.; Chicago and Argo, Ill.; Detroit, and Wyandotte, Mich. The entire expense need not exceed \$70.00. A satisfactory written report upon the work of the trip is required. Fourth year student emphasis is confined to engineering.

Elective for students in the Colleges of Arts and Education and in the Graduate School.

740. Chemical Engineering Measurements and Control. Three credit hours. One Quarter. Winter and Spring. Two lectures and conferences and one four-hour laboratory each week. For Chemical Engineering majors, prerequisite or concurrent, Chemical Engineering 720; for others, senior standing in a scientific or technical curriculum, one year of calculus, one year of college physics, and permission of the instructor. Mr. Geankoplis, Mr. Rebert, and assistants.

Study of the principles employed in the measurement and control of the physical and chemical variables of chemical processes, and the application of these principles to design and use of industrial instruments.

Elective for students in the Colleges of Arts and Education and in the Graduate School.

Not open to students who have credit for Chemical Engineering 771.

761-762. Chemical Technology. Three credit hours. Winter and Spring Quarters. Two lecture hours and one two-hour computational laboratory period each week. Chemical Engineering, fifth year. Prerequisite or concurrent, Chemical Engineering 720, 754, 760, or equivalent and permission of the instructor. Mr. Dryden.

Study of the problems of a number of important chemical industries. Course includes the close integration of Chemistry, Engineering and Economics, based upon fundamental concepts in these fields. Computations for the selection of optimum sizes of equipment and operating conditions. Inter-commodity and inter-process relationships of the chemical industry. The work of the Winter Quarter deals especially with the inorganic industries, while that of the Spring Quarter is related to the organic industries.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

763. Applied Electrochemistry. Three credit hours. Winter Quarter. Two class hours and one four-hour laboratory period each week. Prerequisite, Chemistry 683 or special permission. Mr. Dryden.

* Not given in 1956-1957.

A survey of the electrochemical industries and a discussion of the principles underlying the application of the electric current in chemical industries. Quantitative relationships and application of thermodynamics are stressed, requiring the solution of numerous problems.

Elective for students in the College of Arts and Sciences and Education and in the Graduate School.

770. Chemical Process Development. Five credit hours. Autumn Quarter. One hour conference and five to fourteen laboratory hours each week. Chemical Engineering, fifth year. Prerequisite or concurrent, Chemical Engineering 741-760 or equivalent. Mr. Dryden, and assistants.

Introduction to laboratory research and pilot plant development, process design, and manufacturing cost estimating. A project is developed from the research laboratory stage to the construction and operation of a 150 pound pilot plant and finally to the process design and manufacturing cost estimate for a full scale plant. Experimental data are obtained by the whole class acting as a research and development organization with each individual in charge of some phase of the work. A preliminary process design and cost estimate is made based upon the pilot plant data.

Elective for students in the College of Arts and Sciences and Education and in the Graduate School.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department, see the Bulletin of the Graduate School.

CHEMISTRY

Office, 116 McPherson Chemical Laboratory

General Chemistry Office, 115 McPherson Chemical Laboratory

PROFESSORS MOYER, WOLFROM, HENNE, NEWMAN, GARRETT, HASKINS, HARRIS, LASSETTRE, MacNEVIN, VERHOEK, AND SISLER, ASSOCIATE PROFESSORS CALEY, KURBATOV, MacWOOD, RUBIN, TAYLOR, VAN WINKLE, WATERS, AND SHECHTER, NONRESIDENT ASSOCIATE PROFESSOR ROTHMUND (KETTERING FOUNDATION, ANTIOCH COLLEGE), ASSISTANT PROFESSORS BUSCH, CALVERT, CAVA, COLLAT, MALMBERG, SWEET, DAVID WHITE, AND WILLIAM WHITE, AND ASSISTANTS

407. Elementary Chemistry. Five credit hours. Autumn Quarter. Three lectures, one recitation, and one three-hour laboratory period each week. Designed for students majoring in Physical Education, Nursing, Occupational Therapy, and other students who expect to take only two Quarters of chemistry. Mr. Garrett and assistants.

A course in the general chemistry of the more important elements and compounds. Designed for students who do not expect to take more than two Quarters of chemistry. To be followed by Chemistry 408.

This course cannot be used as prerequisite for Chemistry 412 except by proficiency examination.

408. Elementary Chemistry. Five credit hours. Winter Quarter. Three lectures, one recitation, and one three-hour laboratory period each week. Open to students majoring in Physical Education, Nursing, Occupational Therapy, and other students who expect to take only two Quarters in chemistry. Mr. Calvert and assistants.

A continuation of Chemistry 407 including a study of the more important compounds of carbon, such as petroleum, foods, fabrics, rubber, etc.

This course cannot be used as prerequisite for Chemistry 413 except by proficiency examination.

411. General Chemistry. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures, one recitation, and two two-hour laboratory periods each week. Mr. Garrett, Mr. Haskins, Mr. Verhoek, Mr. MacWood, Mr. Rubin, Mr. Sisler, Mrs. Kurbatov, Mr. Calvert, and assistants.

A general course on the chemistry of the most important non-metals and the fundamental chemical principles. To be followed by Chemistry 412.

It is highly desirable that the student be well prepared in elementary mathematics including high school algebra.

412. General Chemistry. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures, one recitation, and two two-hour laboratory periods each week. Prerequisite, Chemistry 411. Mr. Garrett, general chemistry staff and assistants.

A continuation of Chemistry 411. The chemistry of the non-metals is concluded and such topics as oxidation-reduction, chemical equilibrium, etc., are discussed, and the study of the metals is started. To be followed by Chemistry 413.

Students will be placed in the recitation and laboratory sections in accordance with their proficiency in Chemistry 411.

412-P. General Chemistry. Five credit hours. Autumn Quarter. Two lectures, one recitation, and two two-hour laboratory periods each week. An honors course for proficiency students granted Em credit in Chemistry 411. Mr. Garrett, general chemistry staff and assistants.

The chemistry of the non-metals is studied and such topics as oxidation-reduction, chemical equilibrium, etc., are discussed. The study of the metals is started. To be followed by Chemistry 413-P.

413. Qualitative Analysis. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures, one recitation and two three-hour laboratory periods each week. Prerequisite, Chemistry 412. Mr. Garrett, general chemistry staff, and assistants.

A general course in the chemistry of the common metals and qualitative analysis, dealing with the systematic separation and identification of the cations and anions. It also includes the application of the ionization theory, mass action law, and the principles of chemical equilibrium to qualitative analysis.

Students will be placed in recitation and laboratory sections in accordance with their proficiency in Chemistry 412.

413-P. Qualitative Analysis. Five credit hours. Winter Quarter. Two lectures, one recitation and two three-hour laboratory periods each week. Prerequisite, Chemistry 412-P. Mr. Garrett, Mr. Haskins, general chemistry staff, and assistants.

A general honors course in the chemistry of the common metals and qualitative analysis, dealing with the systematic separation and identification of the cations and anions. It also includes the applications of the ionization theory, mass action law, and the principles of chemical equilibrium to qualitative analysis.

421-422-423. Quantitative Analysis. Three or four credit hours. Three Quarters. 421, Autumn and Winter; 422, Winter and Spring; and 423, Autumn and Spring. One recitation, one laboratory demonstration and five to eight laboratory hours each week. Prerequisite, acceptable courses in general chemistry, including qualitative analysis. Mr. MacNevin, Mr. Moyer, Mr. Caley, Mr. Watters, Mr. Sweet, and assistants.

The fundamental course in quantitative analysis. Chemistry 421 and 422 are devoted to gravimetric and volumetric analysis. Chemistry 423 is largely instrumental methods of analysis and includes colorimetric analysis, electrolytic precipitation, the determination of pH values and potentiometric titration.

Students from different colleges or students having different interests may choose exercises to meet their particular needs.

(a) Students in chemical engineering, pre-medical, medical technology, and pharmacy curricula may take this course for three credit hours.

(b) Qualified students may elect to take this course for four credit hours.

431-432-433. Quantitative Analysis. Five credit hours. Autumn, Winter, and Spring Quarters. Two recitations and nine laboratory hours each week. Prerequisite, acceptable courses in general chemistry including qualitative analysis. Mr. MacNevin, Mr. Moyer, Mr. Caley, Mr. Watters, Mr. Sweet, and assistants.

The fundamental course in quantitative analysis for students majoring in chemistry.

451-452. Organic Chemistry. Five credit hours. 451, Autumn and Spring;

452, Winter and Summer Quarters. Three lectures and two three-hour laboratory periods each week. Prerequisite, one year of general chemistry including qualitative analysis. Mr. Wolfrom, Mr. Malmberg, and assistants.

A general introductory course in organic chemistry including laboratory preparations, arranged for students preparing for Dentistry, Veterinary Medicine, Medical Technology, and Pharmacy.

524. Problems in Quantitative Analysis. Two credit hours. Spring Quarter. Prerequisite, two Quarters of quantitative analysis. Mr. Moyer.

Calculations in quantitative analysis, and the interpretation of analytical data.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

647-648. Organic Chemistry. Three credit hours each. Two Quarters. 647, Autumn and Spring; 648, Winter and Summer. Three lectures or recitations each week. Prerequisite, acceptable courses in general chemistry and Chemistry 421, 422, 423 or their equivalent. Mr. Malmberg, Mr. Wolfrom.

A fundamental course in organic chemistry. Chemistry 647 is devoted to a discussion of the aliphatic hydrocarbons and their derivatives and Chemistry 648 to a discussion of the coal tar compounds.

Not open to students who have credit for Chemistry 451-452.

Not available for graduate credit for students majoring in chemistry.

649. Organic Chemistry: Laboratory. Three credit hours. One Quarter. Autumn and Spring. Nine laboratory hours each week. Prerequisite or concurrent, Chemistry 647. Mr. Malmberg, Mr. Wolfrom, and assistants.

The laboratory work naturally belonging with Chemistry 647. The preparation of a series of typical organic compounds, their purification, and a study of their properties.

Not open to students who have credit for Chemistry 451-452.

Not available for graduate credit for students majoring in chemistry.

650. Organic Chemistry: Laboratory. Two or three credit hours. One Quarter. Winter and Summer. Nine laboratory hours each week. Prerequisite, Chemistry 649; prerequisite or concurrent. Chemistry 648. Mr. Malmberg, Mr. Wolfrom, and assistants.

A continuation of Chemistry 649.

Not available for graduate credit for students majoring in chemistry.

670. Physical Chemistry. Five credit hours. Spring Quarter. Five lectures each week. Prerequisite, Mathematics 418, Physics 413, or their equivalent and ten Quarter hours of organic chemistry or its equivalent. Mr. Van Winkle.

A non-mathematical study of the fundamental principles of physical chemistry arranged for students in the biological sciences or in other non-chemical fields.

Not available for graduate credit for students majoring in chemistry.

Not open to students who have credit for Chemistry 563.

681. Physical Chemistry. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite or concurrent, acceptable courses in organic chemistry, physics, and two Quarters of calculus. It is recommended that Chemistry 691 be taken concurrently with this course. Mr. Johnston, Mr. Harris, Mr. Mack, Mr. Taylor.

The fundamental course in physical chemistry.

Not available for graduate credit for students majoring in chemistry.

682. Physical Chemistry. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Chemistry 681. It is recommended that Chemistry 692 be taken concurrently. Mr. Mack, Mr. Van Winkle, Mr. Taylor.

A continuation of Chemistry 681.

Not available for graduate credit for students majoring in chemistry.

683. Physical Chemistry. Three credit hours. One Quarter. Autumn and Spring. Three lectures each week. Prerequisite, Chemistry 682. It is recommended that Chemistry 693 be taken concurrently. Mr. Harris, Mr. Mack, Mr. Van Winkle, Mr. Taylor.

A continuation of Chemistry 682.

Not available for graduate credit for students majoring in chemistry.

691-692-693. Physical Chemistry: Laboratory. Two credit hours. Autumn, Winter, and Spring Quarters. Six laboratory hours each week. Prerequisite or concurrent, an acceptable course in physical chemistry. These courses are designed to accompany Chemistry 681, 682, and 683, respectively. Mr. D. White, and assistants.

Quantitative measurements of phenomena of chemical interest and the application of chemical principles to their interpretation. The measurements include experiments in the determination of molecular weight and chemical constitution, thermochemistry, reaction rates, equilibria, electrochemistry, colloid chemistry, high vacuum and glass blowing techniques, etc.

701. Minor Problems in Chemistry. One to fifteen credit hours. Any Quarter. Conference, library, and laboratory work. Prerequisite, satisfactory courses in the field of the problem undertaken. A student may repeat this course and may spend all or any part of his time on it during a Quarter. Department Staff.

This course is designed to permit any properly qualified person to avail himself of the library and laboratory facilities of the department for carrying out a minor investigation or for adding to his knowledge and technique in some chemical subject. A student may exercise entire freedom in his choice of instructor to conduct his work in this course.

728. Spectroscopic Analysis. Four credit hours. Autumn Quarter. Two lectures and two three-hour laboratory periods each week. Prerequisite, Chemistry 680 or Chemistry 683 or their equivalent. Mr. Watters.

The theory and the use of the spectograph in the qualitative identification and the quantitative determination of the elements. Applications of emission spectra in the analysis of metallurgical and biological materials.

729. Chemical Spectrophotometry. Four credit hours. Winter Quarter. Two lectures and two three-hour laboratory periods each week. Prerequisite, Chemistry 680 or Chemistry 683 or their equivalent. Mr. Watters.

The application of infrared, visible and ultraviolet spectra to general problems of molecular structure. Spectrophotometric methods applied to organic and inorganic analysis.

754. X-rays and Crystal Structure. Four credit hours. Winter Quarter. Three lectures and one three-hour laboratory period each week. Prerequisite, calculus and one year of college physics. Mr. Harris and assistants.

An introduction to the methods of X-ray crystal analysis. Theory of symmetry of crystals and of diffraction will be discussed and applied in connection with the conventional single crystal and powder methods of structure analysis.

Not open to students who have credit for Chemistry 654, Mineralogy 754, or Physics 754.

761. Advanced Inorganic Chemistry. Three credit hours. Autumn Quarter. Three lectures or recitations each week. Prerequisite, Chemistry 681-682-683 or their equivalent. Mr. Sisler, Mr. Rubin.

An elementary discussion of the theory of atomic structure and the electronic configurations of the elements in relation to the periodic system, followed by an introduction, on a non-mathematical basis, to the modern theory of the chemical bonds.

A systematic study of the families of the elements and their compounds will be included. Emphasis will be placed (1) on the equilibria and factors influencing the speed of reaction, and (2) on the relation of properties of the elements and their compounds to atomic and molecular structure.

762. Advanced Inorganic Chemistry. Three credit hours. Winter Quarter. Three lectures or recitations each week. Prerequisite, Chemistry 761. Mr. Rubin, Mr. Sisler.

A continuation of Chemistry 761.

764. Advanced Inorganic Chemistry. Three credit hours. Spring Quarter. Three lectures or recitations each week. Prerequisite, Chemistry 762. Mr. Sisler, Mrs. Kurbatov.

A study of the transition metals. The periodic table relationships, electronic configurations, thermodynamic properties, oxidation states, complex compounds, and methods of separating these elements will be discussed. Recent research in these fields will be reviewed.

***769. Solution of Electrolytes.** Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Chemistry 681-682-683 or their equivalent. Given in alternate years. Mr. Verhoek.

A consideration of the properties of electrolytic solutions, the Debye-Hückel theory, the strength of acids and bases in various solvents, solubility of electrolytes in various solvents, and conductivity of solutions of electrolytes.

Not open to students who have credit for Chemistry 768.

772. Inorganic Chemistry: Laboratory. Three credit hours. Winter Quarter. Nine laboratory hours each week. Prerequisite, acceptable courses in general chemistry, quantitative analysis, and Chemistry 681-682-683. Mr. Rubin, Mr. Sisler.

Minor problem in the use of modern techniques in the field of synthetic and physical inorganic chemistry including the use of liquified gases, low temperature and high temperature apparatus, high pressure and high vacuum apparatus, oxygen-free systems, etc.

782. Chemical Bibliography. One credit hour. Autumn Quarter. One conference each week. Prerequisite, acceptable courses in analytical and organic chemistry. Mr. Wolfrom.

Designed to train the advanced student in the use of the chemical library, and to instruct him in the character of various chemical journals, dictionaries, reference books, and other sources of information pertaining to chemical subjects.

784. History of Chemistry. Two credit hours. Spring Quarter. Two lectures each week. Prerequisite, acceptable courses in analytical and organic chemistry. Mr. Caley.

A general course in the history of chemistry with special reference to the development of the theories of the science.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 684.

NOTE: For Industrial Chemistry and Chemical Engineering Courses see the Department of Chemical Engineering.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of Graduate courses in this department see the Bulletin of the Graduate School.

CIVIL ENGINEERING

Office, 107 Brown Hall

PROFESSORS GRAY, KARRER, LARGE, SHANK AND VANDEGRIFT, ASSOCIATE PROFESSORS BAKER, COSENS, AND SMITH, ASSISTANT PROFESSORS MOULTON AND PURTZ, MR. CRAIG

620. Environmental Sanitation. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, junior standing in the University and one year of college chemistry. Prerequisite or concurrent, one course in bacteriology. Mr. Cosens.

Communicable disease; water, milk, and food sanitation; excreta and refuse disposal, insect and rodent control; building and general sanitation.

+621. Environmental Health Training (With State Department of Health.) Ten credit hours. Six full weeks of the Summer Quarter, plus study and preparation of reports. Prerequisite, Civil Engineering 620. Mr. Cosens.

* Not given in 1956-1957.

† Not given during the academic year, 1956-1957.

Intensive field training in a state health department, with special emphasis on the part played by engineers in public health work. The course is conducted under a cooperative arrangement with the State Department of Health, and conducted by its personnel in or near Columbus.

CLASSICAL LANGUAGES AND LITERATURE

Office, 217 Derby Hall

PROFESSORS TITCHENER, ABBOTT, AND FORBES, ASSOCIATE PROFESSOR JONES

CLASSICAL LANGUAGE COURSES IN ENGLISH

No prerequisites in Latin or Greek.

***507. Roman Private Life.** Three credit hours. Winter Quarter. Mr. Forbes.

Lectures, illustrated with lantern slides on the daily life and customs of the Romans, their business and family relations, their amusements, dress, homes, and household furniture. A knowledge of Latin is not required for this course and it is open to all students who are interested in the subject.

510. Classical Backgrounds of Scientific Terminology. Three credit hours. One Quarter. Autumn, Winter, Spring. Mr. Forbes.

Study of root and word formation of scientific terms derived from Greek and Latin; practice in forms and understanding new terms by means of Greek and Latin words. Intended to meet the needs of premedical and premedical students in the Arts College, and of those students preparing to specialize in biological and earth sciences.

520. The Greek Foundation of European Literature. Five credit hours. Autumn Quarter. Mr. Forbes.

Homer, tragedy, Aristophanes, with brief study of lyric and elegiac poetry, the development of prose and typical literature of the Alexandrian period.

521. The Latin Contribution to European Literature. Five credit hours. Winter Quarter. Mr. Forbes.

The major poets and dramatists, with brief study of prose, historical, oratorical and philosophic. Emphasis will be placed on an analysis of classicism in Classical Literature.

522. Classical Mythology. Five credit hours. Spring Quarter. Mr. Jones.

A study of types and development of Classical Mythology with particular reference to the use of mythology in English literature.

GREEK

401. Elementary Greek. Five credit hours. Autumn Quarter. Mr. Jones.
Grammar and practice in translation of the Greek idiom.

402. Elementary Greek. Five credit hours. Winter Quarter. Prerequisite, Greek 401 or its equivalent. Mr. Jones.

Continuation of grammar and selected readings.

403. Plato. Five credit hours. Spring Quarter. Prerequisite, Greek 402. Mr. Jones.

Reading in the easier dialogues; the personalities of Socrates and Plato and their work.

504. Homer. Five credit hours. Autumn Quarter. Prerequisite, Greek 402. Mr. Jones.

Reading in the Iliad and Odyssey; the epic of Greece.

NOTE: For courses in Principles of the Historical Study of Language, see German 705.

LATIN

Students with two years of high school Latin should enroll in Latin 404; with the three years of high school Latin, including Cicero, in Latin 406; with three years of high school Latin, including Vergil, in 404 or 406. 406 is advised for Latin majors. All students except those taking Latin 401 are required to take a Placement Test, which will indicate the University Course for which each is best prepared. A Placement Test will be given at the beginning of each Quarter.

* Not given in 1956-1957.

401. Elementary Latin. Five credit hours. Autumn Quarter. This course is for students who have not studied Latin.

Grammar and practice in translation of the Latin idiom.

402. Elementary Latin and Caesar. Five credit hours. Winter Quarter. Prerequisite, Latin 401.

Continuation of grammar and selected readings.

404. Cicero. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Latin 401-402, Latin 412 or two years of high school Latin.

Readings from Cicero with review of syntax.

405. Vergil. Five credit hours. One Quarter. Winter and Spring. Prerequisite, Latin 404 or the equivalent in high school Latin.

Readings from the Aeneid.

406. Horace. Five credit hours. Autumn Quarter. Prerequisite, Latin 401-404 or three years of high school Latin. Mr. Titchener.

The Odes of Horace through the first book with selected poems of the later books.

407. Livy. Five credit hours. Winter Quarter. Prerequisite, Latin 405 or 406. Mr. Titchener.

The first book of Livy describing the founding of the Roman state.

408. Latin Comedy. Five credit hours. Spring Quarter. Prerequisite, Latin 405, 406, or 407. Mr. Titchener.

Selected plays of Plautus and Terence.

501. Tacitus, Martial. Three credit hours. Winter Quarter. Prerequisite, Latin 407 or 408. Mr. Abbott.

502. Letters of Pliny and Cicero, Catullus. Three credit hours. Autumn Quarter. Prerequisite, Latin 407 or 408. Mr. Forbes.

503. Ovid, Sallust, or Petronius. Three credit hours. Spring Quarter. Prerequisite, Latin 407 or 408.

505. Grammatical Review. Three credit hours. Autumn Quarter. Prerequisite, Latin 407 or 408. Mr. Titchener.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

†603. Advanced Reading. Three credit hours. Summer Quarter. Prerequisite, six Quarters of college Latin.

608. Roman Art and Archaeology. Three credit hours. Winter Quarter. Prerequisite, for majors in Classical Languages, six Quarters of college Latin; for students in the School of Fine and Applied Arts, Fine Arts 501; other qualified students may be admitted by special arrangement. Mr. Jones.

Study of Roman architecture, sculpture, and painting. Lectures, discussions and reports on special topics.

612. Latin Prose Composition. Three credit hours. Winter Quarter. Prerequisite, five Quarters of college Latin. Mr. Forbes.

Exercises and lectures on Latin idiom and style.

615. Proseminar I. Three credit hours. Winter Quarter. Prerequisite, six Quarters of college Latin. Mr. Titchener.

Lectures on the life and period of Cicero. Readings from the Letters and Essays. Latin 615 is designed especially for students preparing to teach Latin.

616. Proseminar II. Three credit hours. Spring Quarter. Prerequisite, six Quarters of college Latin. Mr. Titchener.

Lectures on the life and works of Vergil, and his influence on modern literature; readings from the Eclogues and the Georgics. Latin 616 is designed especially for students preparing to teach Latin.

† Not given during the academic year, 1956-1957.

617. Proseminar III. Three credit hours. Autumn Quarter. Prerequisite, six Quarters of college Latin. Mr. Titchener.

Lectures on topics suggested by the study of Caesar's Gallic and Civil Wars; special consideration of literary style, political and military campaigns. Latin 617 is designed especially for students preparing to teach Latin.

627. Vulgar Latin. Three credit hours. Winter Quarter. Prerequisite, six Quarters of college Latin, French 801, or equivalent linguistic basis. Mr. Abbott.

Lectures and the study of texts and inscriptions illustrating the development of the popular speech.

631. Private Reading and Minor Problems. One to six credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, one reading course more advanced than Latin 408. The staff.

Passages for private reading and topics for investigation will be suggested to meet the needs of individual students.

650-651-652. History of Roman Literature. Three credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, three reading courses more advanced than Latin 408. The content of the readings within this course is so extensive that graduate students may repeat this course for credit. Mr. Abbott.

Lectures and assigned reading in literary histories on the development of Roman Literature; required and suggested passages for translation in each author studied; brief weekly reports.

720. Introduction to Historical Greek and Latin Grammar. Three credit hours. Autumn Quarter. Prerequisite, ten hours of advanced work in the classics. Mr. Abbott.

The sounds of Latin from the Indo-European period to Classical Latin times. An introduction to Latin etymology, the history of the Latin Language, and comparative Greek and Latin grammar.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 694.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

COMPARATIVE LITERATURE AND LANGUAGE

Office, 112 Derby Hall

HARRY ROGERS, CHAIRMAN OF COMMITTEE

COMPARATIVE LITERATURE

401-402-403. Introduction to Western European Literature. Three credit hours each Quarter. Autumn, Winter, Spring. Lectures and discussion of required reading. (Sections limited to twenty-five.) Mr. Abbott, Mr. Doolittle, Mr. Elliott, Mr. Rogers, Mr. Haber, Mr. Kane, Mr. Wonderley, Mr. Harding, Mr. Helsingier, Mr. Titchener.

A course in the great books of the western world and the part they play in the development of modern European and American culture. Major emphasis will be upon the ideas and attitudes of the books themselves rather than upon literary history, and themes will be developed so far as possible by class discussion rather than lectures. The three courses are designed as a sequence but may be taken separately.

401. (Autumn Quarter) The Greek contribution, Greek thought as contrasted with Judaeo-Christian. Development of Greek ideas and ideals from Homer to Aristotle.

402. (Winter Quarter) The Latin contribution and influence of Christianity. Roman nationalism and its results. The contribution of the Bible in the formation of medieval and modern thought.

403. (Spring Quarter). The Modern world. Milton, Moliere, Shakespeare, Goethe, Thackeray.

CONSERVATION

401. Introduction to Conservation of Basic Natural Resources. Three credit hours. One Quarter. Autumn and Spring. Three lecture and discussion hours each week. Mr. Johnson, Mr. Good.

An orientation course designed for all students interested in the broad concepts of conservation, and in the interrelation of the technical, economic, social, and political aspects of conservation with human life and activities. The reasons for public concern with the conservation and improvement of soil, water, plant and animal life, forest and mineral resources and in wildlife will be studied. This course offers a general introduction to the field of conservation rather than specialized or professional training. One two-day field trip will be taken on Friday and Saturday.

514. Conservation Agencies and Relations. Three credit hours. Winter Quarter. Three discussion periods each week. Mr. Johnson.

A course on progress, problems, agencies, and vocational opportunities in conservation. Representatives of government agencies, private organizations and university departments present programs and problems in their area of conservation work.

Not open to students who have credit for Conservation 511-512-513.

DENTAL HYGIENE

(For curriculum, see page 70. For courses, see the Bulletin of the College of Dentistry.)

DRAWING

(See Engineering Drawing)

ECONOMICS

Office, 239 Hagerty Hall

PROFESSORS BOWERS, SMART, JAMES, HERBST, PATTON AND DEWEY, ASSOCIATE PROFESSORS HARRISON, LOVENSTEIN, MILLER, COONS, TUTTLE, PARNES, QUANTIUS, CONDOIDE, AND BICKLEY, ASSISTANT PROFESSORS STEVENS, LYNN, OSTER, ATHEARN, CRAIG, TYBOUT, AND COCHRAN, MR. ERVIN, MR. TROUTMAN, MR. MONTEITH, MR. GALLMAN, MR. KEIG, MR. KAFOLIS, ASSISTANT INSTRUCTORS AND ASSISTANTS

400. Development of Modern Economic Society. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Open only to Freshmen and Sophomores. Mr. Patton, Mr. Parnes, Mr. Cochran, and others.

A study of the dominant historic forms of economic organization designed to provide a basis for understanding both the evolutionary nature of society and the role of capitalism in social development.

401-402. Principles of Economics. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Five class meetings each week. Not open to Freshmen. Mr. James, Mr. Lovenstein, Mr. Coons, and others.

A study of the organization and operation of our economic system, with the objective of developing an intelligent understanding of our present economic problems. Among the subjects studied are cost and price relationships; money and banking; taxation; labor problems; agricultural economics; international trade and finance; and public control of business activity.

NOTE: Freshmen with a cumulative point-hour ratio of 8.0 or above on their first two Quarters of work may enroll for this course in their third Quarter in residence, if they have already secured credit for Economics 400 and Business Organization 401.

406. Outlines of Economics. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Not open to Freshmen. Mr. Harrison, Mr. Athearn, and others.

An analysis and description of the basic characteristics of our economic system; a study of the significant problems arising in its operation and an appraisal of their proposed solutions.

Not open to students who have credit for Economics 401-402.

509. Outlines of Public Finance. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Lynn, Mr. Oster, Mr. Ervin, Mr. Gallman.

A survey of the entire field of public finance; expenditures, revenues, and debts. Especial attention will be given to the subject of taxation. This course is not a prerequisite to Economics 631 or 632 but it may not be taken by students who have had those courses.

510. Problems of Labor. Three credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Miller, Mr. Parnes, Mr. Keig.

A survey of the problems of the American wage earner and of the principal methods used by workers, employers, and government in dealing with these problems.

Not open to students who have credit for Economics 637, 638, 639, or 641 and should not be taken by students who plan to enroll in 637, 638, or 639.

515. International Economic Relations. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Not open to students with a major in International Trade. Mr. Coons.

A survey of the field of international economic relations, including an explanation of the basis for world trade, the adjustment of international accounts, capital movements, commercial and financial policy particularly of the United States, and recent international economic organizations.

520. Money and Banking. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Lovenstein, Mr. Stevens, Miss Quantius, Mr. Gallman.

This course is intended as an introductory study to the more technical courses in banking and finance and also to give a comprehensive view of the field for those who are primarily interested in other subjects. The organization, operation, and economic significance of our monetary and banking institutions are discussed, with special reference to current conditions and problems.

522. Elementary Economic Statistics. Four credit hours. One Quarter. Autumn, Winter, Spring. Three lectures and one two-hour laboratory period each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Smart, Mr. Tuttle, Mr. Ervin.

Collection of primary statistical data. Primary and secondary sources. Tabular and graphic presentation. Ratios. The frequency distribution. The partition values and measures of location, dispersion, skewness and kurtosis. Sampling. Tests of significance. Analysis of time series with special emphasis on index numbers. Simple rectilinear correlation.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

606. Current Economic Problems. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Coons.

An examination of current economic problems such as: the maintenance or securing of an optimum level of employment; the conditions underlying consumer expenditures, savings, and investments; problems of inflation and deflation; special problems of agricultural production and prices; public works, housing, and regional development.

Not open to students who have credit for Economics 604-605.

613. Problems of Monetary-Fiscal Policy. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 520 or its equivalent. Miss Quantius.

An institutional and theoretical analysis of the monetary and fiscal system. Monetary-fiscal policies for stabilization at high levels of production, employment, and income. Emphasis on contemporary problems of policy.

624. Principles of Insurance. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Bowers, Mr. Bickley, Mr. Lynn, Mr. Ervin.

A study of the theory and practice of the principal types of insurance in the life, fire, and casualty fields. The economic theory of risk; loss prevention; state supervision, etc.

627. Analysis and Control of Business Cycles. Three credit hours. Spring Quarter. Prerequisite, Economics 402 or 406 and 520, or 507 and 520. Mr. Dewey.

A general survey of changes in price levels and production. Past and current theories of business cycles. Proposed plans for control of economic fluctuation.

629. American Capitalism Since the Civil War. Three credit hours. Winter Quarter. Prerequisite, Economics 402, 406, or 507. Mr. Harrison.

The development of American capitalism with special emphasis given to the rise of big business and organized labor, the significance of increasing rigidities in the price-income structure and the growing of government in economic life.

631. Governmental Expenditures. Three credit hours. Autumn Quarter. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Smart.

Growth of public expenditures. Factors leading to such growth. Classification and control of public expenditures. Public debt.

632. Governmental Revenues. Three credit hours. Winter Quarter. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Smart.

Treatment of various sources of revenues with special emphasis upon taxation. Particular attention will be given to the tax and revenue system of the State of Ohio and its political subdivisions.

633. Governmental Fiscal Administration. Three credit hours. Spring Quarter. Prerequisite, Economics 509 or 631 and 632. Mr. Smart.

Fiscal relationships among federal, state, and local governments. The growth of grants-in-aid and subsidies. Shared taxes. Fiscal policy.

637. The American Labor Movement. Five credit hours. One Quarter. Autumn and Winter. Five class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Miss Herbst, Mr. Parnes, Mr. Miller.

The history and theory of the American labor movement. Evolution of public policy toward collective bargaining. Trade union policies, programs, organization and administration.

638. Labor and the Government. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Miss Herbst, Mr. Miller, Mr. Parnes.

The role of the legislative, judicial, and executive branches of government with respect to labor problems and labor relations. State and federal protective legislation. State and federal regulation of labor-management relations.

639. Social Insurance. Three credit hours. One Quarter. Autumn and Spring. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Bowers.

A study of the theories and operations of social insurance systems as devices for providing security against the hazards of unemployment, disability, dependent old age and premature death. Among the topics covered are, unemployment compensation and wage guarantees, workmen's compensation insurance, non-occupational disability insurance and old age and survivors insurance.

640. Foreign Labor Movements. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 507. Miss Herbst.

The history and development of labor movements in selected countries. The political, legal, economic and social foundations of industrial relations in these countries. The international labor movement.

645. Consumption Economics. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Coons.

The economics of consumption from the standpoint of the individual and of society; wealth and income in relation to consumption; price levels and cost of living; standards and levels of living; consumer budgets; influences determining consumer choice; the consumer movement, including consumer cooperatives; government aid and protection to the consumer.

650. The Labor Market. Three credit hours. Spring Quarter. Prerequisite, Economics 510 or 641 or 637. Mr. Parnes.

Materials and methods of labor market analysis. The labor marketing process in its institutional setting. Composition of the labor force. Recent research in labor mobility. Workers' labor market behavior and the labor allocation process.

654. Soviet Economic System. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Condoide.

The theory and practice of Soviet economics with major emphasis on economic planning; allocation of factors of production; spending, saving, and investing; money and credit; public finance; international trade and finance; and agriculture.

Not open to students who have credit for Economics 525.

656. National Income Analysis. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507, and Economics 522. Mr. Coons.

A study of the technique, sources of information, and methods of testing and verification involved in Social Accounting; analysis of procedures used by the Department of Commerce in its estimates of Gross National Product and National Income.

660. Population. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507; or the equivalent of one of these, with the permission of the instructor. Mr. Harrison.

The growth and distribution of population. The relation of numbers to resources, productive capacity, standard of living, prosperity, and international economic problems. The dynamic aspects of population in relation to material and moral progress. Critical consideration of population theories and policies.

664-665-666. International Trade and Finance. Three credit hours. Three Quarters. 664, Autumn; 665, Winter; 666, Spring. Prerequisite, Economics 402 or 406 and 520, or 507 and 520. Mr. James.

Theories of international trade; the United States and major industrial countries as related to the world economy in terms of their balance of payment; international economic policy; types of trade restrictions; new organizations for stabilization of international trade and finance.

673. Principles of Social Economy. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Patton.

The intent of this course is to arrive at some insight into the meaning and criteria of ideal economy, not in its material and technological, but in its fundamental human aspects. Purposive economics in relation to fundamental human values. Fundamental values and instrumental values. The means-end relation and the principle of economy and means. Income as opportunity, and the economic criteria of distribution of opportunity. The conflict between efficiency, liberty, and the ideal use of resources, material and human. Democracy and authoritarianism in relation to economy. An economic interpretation of social conflict and social ethics.

674. Design of Statistical Inquiry in Social Sciences. Two credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Economics 522 or the equivalent and thirty credit hours in social science, and permission of the instructor.

Studies of deductive and inductive methods of analyzing socio-economic and business problems. Statistical schedule design, interdependence of cases, questionnaires, codes, skeleton tables and methods of tabulation, including electrical punchcard. Need for and means of obtaining statistical comparability from sample data. Problems involved in the use of sample data for measuring trends. Preparing the report.

Not open to students who have credit for Economics 527.

675. Mathematical Economic Theory. Three credit hours. Summer or Autumn Quarter (alternating between Summer Quarter of even-numbered and Autumn Quarter of odd-numbered years). Prerequisite, Economics 402 or 404 or 406 or 507, a standard course in college algebra, and permission of the instructor. A knowledge of differential calculus is desirable. Mr. Tuttle.

Application of the essentials of differential calculus in deriving the principal theories of economic marginal analysis. Illustrative problems and examples.

Not open to students who have credit for Economics 878.

679. Economic Problems of Western Europe. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507. Mr. Condoide.

The role of Western Europe in the world economy. The effects of World War II and problems of reconstruction and of east-west trade. Programs for European integration and the work of international economic agencies.

Courses in the 700-group are open to senior and graduate students.

707-708-709. Intermediate Economic Analysis. Three credit hours. Three Quarters. 707, Autumn; 708, Winter; 709, Spring. Three class meetings each week. Prerequisite, Economics 402 or 406 and 520, or 507 and 520. Mr. James.

A review of the scope and nature of economic analysis; competitive and monopolistic markets in the allocation of consumers' goods and inputs of the factors of production; coordination of basic economic processes at different output-levels.

710-711-712. Statistical Analysis. Two credit hours. Three Quarters. 710, Autumn; 711, Winter; 712, Spring. Prerequisite, four credit hours of Statistics. Mr. Smart.

Analysis of frequency distributions, correlation and the analysis of variance. Sampling, the design of statistical inquiries and tests of significance as well as the control of the quality of product from the statistical point of view will be emphasized. The use of tabulating and mechanical equipment in handling statistical problems will be treated.

719. Public Control of Economic Processes. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Economics 402 or 404 or 406 or 507, and Political Science 618 or the equivalent. Mr. Dewey.

Economic and legal foundations of government regulation as applied to evolving business institutions in the United States; the economic interpretation of constitutional authority as modified by common law precedent and implemented by statutory enactments; applications to specific problems.

Not open to students who have credit for Economics 716, 717, and 718.

799. Special Problems in Economics. One to three credit hours each Quarter in any one field. For seniors, not more than five credit hours may be taken in this course; for graduate students, not more than three credit hours may be received in any one field nor a total of more than twelve hours in the course. Any Quarter. Prerequisite, satisfactory advanced courses in economics and related fields. Senior Staff.

Individual study in some field of economic interest under the direction of the appropriate member of the staff.

- (a) Economic Theory; History of Economic Thought
- (b) Economic History, American and European
- (c) Labor Relations; Labor and Government; Special Insurance
- (d) Money; Credit; Banking; Monetary-Fiscal Policy
- (e) Public Finance
- (f) International Economic Relations
- (g) Transportation; Public Utilities; Public Control
- (h) Economic Statistics; Econometrics
- (i) Business Fluctuations; National Income Accounting
- (j) Economic Systems; Planning and Reform; Welfare Economics

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

EDUCATION

Office, 120 Arps Hall

PROFESSORS FAWCETT, ALBERTY, ANDERSON, ARISMAN, BURR, CAHOON, CAMPBELL, EBERHART, EIKENBERRY, GOOD (EMERITUS), GRIFFIN, HANNA, HARDING, HECK, HULLFISH, KIRCHER, LANDSITTEL (EMERITUS), MENDENHALL, LEWIS (EMERITUS), RAMSEYER, REEDER (EMERITUS), RICHARDSON, SEELY, SMITH (EMERITUS), STONE (EMERITUS), STREITZ, THARP, WARNER, AND ZIRBES (EMERITUS), ASSOCIATE PROFESSORS HAWS, JEWETT, LAUGHLIN, LAZAR, LOGAN, PETERS, REESE, AND WELLS, ASSISTANT PROFESSORS CORBALLY, DICKSON, FARWELL, HUCK, MACKAY, MEHL, NORMAN, RICEY, SUTTON, AND TOMLINSON, INSTRUCTORS AND ASSISTANTS.

Courses listed in the Department of Education include those previously offered by the Department of Adult Education, History of Education, Practical Arts and Vocational Education, Principles and Practice of Education, and School Administration.

Courses in the Department of Education are arranged under the following headings:

Elementary Education, Guidance, Higher Education and Teacher Training, Minor Problems, Philosophy and History of Education, School Library Science, Secondary Education, Special and Adult Education, Vocational and Practical Arts Education, Workshops and Field Experience.

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NOTE: Attention is called to the service course (Psychology 680) offered for those majoring in Elementary Education or Secondary Education or Educational Administration.

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641	156	764-766	152
643	140	770-774	152
645	143	775	142
646-648	144	776-778	143
649	146	780-782	154
654	140	798-799	159
655	156		

ELEMENTARY EDUCATION

408. Introduction to the Study of Education. Three credit hours. One Quarter. Autumn, Winter, Spring. Required of all freshmen and transfer students enrolled in General Secondary, Elementary, and in most of the Special curricula in teacher-education. Freshmen and transfer students will enroll for this course in the earliest possible Quarter.

An introductory study of the cultural factors that effect education, with students helped to an understanding through an examination of their own lives. Mr. Peters and staff.

509. Kindergarten and Pre-school Teaching. Three credit hours. Autumn Quarter. Three class meetings and two laboratory periods each week. Prerequisite, Education 514 for all elementary majors. Others, permission of the instructor. Miss Miller.

In this course students who are especially interested in early childhood are acquainted with recent developments in the education of young children and with their bearing on the selection and guidance of appropriate activities.

Not open to students who have credit for Education 618.

510. Theory and Practice in Elementary Education: Arithmetic. Three credit hours. One Quarter. Autumn, Winter, Spring. This course must be scheduled concurrently with or following Education 514. Mr. Harding.

This course is designed for prospective teachers in kindergarten and the elementary school. It is devoted to the study of materials and methods of teaching arithmetic, with emphasis upon the development of functional programs of instruction in relation to the other subject areas. Diagnostic and remedial work are included.

513. Pupil Personnel in Elementary Education. Four credit hours. Winter Quarter. Lectures, discussions, observations, and laboratory work on the elementary school level. Mr. Heck.

Importance of knowledge of individual in modern education; social responsibility for individual guidance; means of knowing the child through measurement, case study and records; ways and means of effectively recording data; critical study of record forms; constructive use of data. Study of work of visiting teacher, child guidance clinic, vocational counselor.

514. Theory and Practice in Elementary Education: Conceptions of Teaching. Four credit hours. One Quarter. Autumn, Winter, Spring. Not open to freshmen. Mr. Tomlinson.

This is the first of the basic courses in the professional sequence required in the elementary curriculum. It deals with the problems of the modern teacher at the various levels of childhood education. It provides opportunities for school service and utilizes these to sensitize students to the responsibilities and resources with which prospective teachers must become familiar in meeting the needs of children. Visits to schools and discussions of problems at various levels from kindergarten through sixth grade are utilized and related to readings from professional literature in order that students may broaden and deepen their conceptions of teaching. One-half day each week should be reserved for school visits.

515. Theory and Practice in Elementary Education: Child Guidance. Four credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Education 514. Open only to students in the College of Education. Miss Streitz, Miss Norman.

This course is chiefly concerned with the teacher's insight and understanding of approved practices in the development and education of children. Significant research provides the basis for class work. Systematic observations of children both as individuals and in groups at the University School supplements class discussion. Readings and reports are required. Students will have opportunity for direct experiences with children in a variety of activities.

516. Theory and Practice in Elementary Education: The Language Arts. Four credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Education 514. Education 516 and 517 should be scheduled during the same Quarter on the same days of the week and at consecutive hours. Open only to students in the College of Education. Mr. Dickson.

This course gives particular consideration to the language arts (reading, writing, spelling, oral and written composition) in the elementary program. Opportunities for participation in the elementary school classrooms.

517. Theory and Practice in Elementary Education: The Social Studies. Four credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Education 514. Education 516 and 517 should be scheduled during the same Quarter on the same days of the week and at consecutive hours. Open only to students in the College of Education. Mr. Burr, Mr. Tomlinson.

This course follows the sequential arrangement of the Elementary Education curriculum, placing particular emphasis upon the social studies in the elementary school program. It involves a study by prospective elementary school teachers of experiences which will help children understand basic social functions, with emphasis upon the organization of these experiences about broad units of work. Consideration is given to the importance of, and the problems involved in providing for democratic living in the elementary school.

518. Theory and Practice in Elementary Education: Student Teaching. Five to fifteen credit hours. One Quarter. Autumn, Winter, Spring. Reserve entire forenoon daily and the hours one to four Tuesday and Thursday. Maximum transfer credit accepted is five hours. A minimum of twelve credit hours is required for graduation and certification.

Prerequisites are as follows: All required Education courses except Education 607 which may be taken concurrently or following Education 618; Fine Arts 569 and 570. Music 546, 547, and 548; Physical Education 476; Psychology 407; ten hours of Sociology. Open only to students in the College of Education. Miss Miller.

NOTE: For all students in the elementary education curriculum, an average point-hour ratio of 2.25 on all professional courses taken at this University will be required for admission to Education 518. These courses are those listed above as prerequisites. Students should register for student teaching upon attaining cumulative credit of one-hundred twenty Quarter hours.

520. Supervised Student Teaching in Special Subject Fields in the Elementary Schools. Three to seven credit hours. Autumn, Winter, Spring. This course should be taken by all students who are preparing to teach and who are specializing in either Music or Fine Arts, and will usually be taken preceding enrollment in Education 536. Open only to juniors and seniors under the conditions for admission and prerequisites as listed below. Specific area requirements for admission to student teaching may be obtained in mimeographed form from the Office of Student Field Experience, Room 103, Arps Hall. Mr. Andrews and others.

(Section) A. Student Teaching in Instrumental Music. Three to seven credit hours. Prerequisite, Music 408A (6 hours), 511C, D, and E (12 hours), 512C, D, or E (4 hours), 513, 522, 531, 540, and 541. Approval by the Applied Music Examining Board for junior standing, and a point-hour ratio of 2.25 in the required music education courses and in the required music courses. Required in Music Curricula II and III. Mr. McBride.

(Section) B. Student Teaching in Vocal Music. Three to seven credit hours. Prerequisite, Music 511A or B (12 hours), 522, 523, 524, 531, and 540. Approval by the Applied Music Examining Board for Junior Standing, and a point-hour ratio of 2.25 in the required music education courses and in the required music courses. Required in Curricula I and II. Miss Thomas.

520C. Student Teaching in Fine Arts. Three to seven credit hours. Prerequisite, Fine Arts 548, 549 and an average point-hour ratio of 2.25 in Fine Arts. To be taken concurrently with Education 538 unless this course has been completed previously. Required in Art Education curriculum. Mrs. Mitchell.

Application. To obtain admission to any of the sections of this course, students must file applications at least two Quarters prior to the Quarter in which they plan to enroll. Blanks for the purpose are procurable in Room 103, Arps Hall, where the applications are filed.

Placements. Similarly at the time of registration for any section of the course, placement cards (procurable in Room 103, Arps Hall) must be filled out. Schedules on which Education 520 appear will not be approved by the Secretary of the College until placement cards have been filled out.

521. Children's Literature. Three credit hours. One Quarter. Autumn, Winter, Spring. This course must be scheduled concurrently with or following Education 514. Miss Koste.

A study from the literary and educational points of view of the best literature for elementary school children. Folk literature, fiction, poetry, drama, and subject matter books. Emphasis on development of standards for selecting materials with reference to the interests, needs, and abilities of children at different age levels.

522. Industrial Arts Laboratory for Teachers in Elementary Schools. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour periods each week for lecture and laboratory. Enrollment limited to majors in Elementary and Special Education. Mr. Haws.

Laboratory experience involving the use of tools and materials which enter into an activity curriculum in elementary schools. These activities deal with materials, processes, and products through which society supplies its needs for food, clothing, shelter, utensils, records, and transportation.

528. Theory and Practice in Elementary Education: Science. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, ten hours of science and Education 514. Mr. Evans.

Closely related to the other sequence courses in the Elementary Education curriculum (for explanation, see Education 514), this course considers the relationships between nature, environment, and elementary science in their role in childhood education. Possible resources and ways and means teachers and pupils may use them in the school program.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations courses in this group are not open to Freshmen or Sophomores.

601. Radio and Television in Education. Three credit hours. Autumn Quarter. Prerequisite, senior standing. Mr. Tyler.

The role of radio and television in the education of both adults and children, in and out of school. Educational objectives in broadcasting, and the planning, production, utilization, and evaluation of programs will be considered. Opportunities for observation and individual problems.

602. Audio-Visual Materials of Instruction. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, senior standing. Mr. Dale, Mr. Woelfel.

The contribution of audio-visual materials to educational objectives, with especial attention to the research literature; principles governing selection and use of films, records, slides, and the like.

643. Science in Elementary Education. Three credit hours. Spring Quarter. Prerequisite, fifteen hours of education including Education 514 or the equivalent. Mr. Richardson.

The significance of research for elementary school science, the relation of science to the elementary school curriculum, and the functions of supervisory personnel. For graduate students and undergraduate students with teaching experience.

649. Practicum in Problems of Public Education. For description see page 146 under Secondary Education (General Field).

654. Mathematics in the Elementary School. Three credit hours. Spring Quarter. Prerequisite, fifteen hours of education including Education 514. Mr. Harding.

A study of the development and educative functions of arithmetic and other branches of mathematics in the elementary school. Considers the influence of scientific studies upon the several theories of teaching, the principles upon which they are based, the selection and arrangements of material, development of courses of study, and the improvement of current educational practice. The emphasis throughout is upon the development of mathematical thinking.

Not open to students who are pursuing the curriculum for elementary teachers except by special permission of the departmental adviser.

655. Industrial Arts in Elementary School. For description see page 156 under Industrial Arts Education.

656. Language and Reading in the Elementary School. Three credit hours. Winter Quarter. Prerequisite, fifteen hours of education including Education 514. Mr. Dickson.

Modern trends in the teaching, organization, and administration of a functional language-arts program (reading, oral and written expression, handwriting, and spelling). The bearings of investigations and modern theory on the improvement of current practices.

Not open to students who are pursuing the curriculum for elementary teachers except by special permission of the departmental adviser.

657. Social Studies in the Elementary School. Three credit hours. Autumn Quarter. Prerequisite, fifteen hours of education including Education 514. Mr. Burr.

This course considers the educational values of the social studies, reasons for, and ways and means of integrating history, geography, and civics, and the development of pupils of appropriate emotional and thought reactions to social problems and issues. Opportunity is afforded for observation in the University Elementary School.

Not open to students who are pursuing the curriculum for elementary teachers except by special permission of the departmental adviser.

661. Guidance Problems in the Elementary School. Two or three credit hours. Winter Quarter. Prerequisite, twenty hours of Education including Education 514 or equivalent. Mr. Tomlinson.

Emphasizes problems which the elementary school teacher faces in providing individual, small-group, and whole-group guidance. Problems within the areas of planning with children, modern practices in discipline, evaluating with children, carrying on group work, keeping records, reporting to parents will be considered. Students will choose one problem for major concentration preparing a comprehensive written report.

NOTE: For course in Health Education for Elementary Teachers, see the Department of Physical Education, Course 609.

GUIDANCE

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

661. Individual Studies in Education. For description see above under Elementary Education.

750. Introduction to Guidance Services. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, junior standing and twenty Quarter-credit hours in education and allied subjects of which ten, approved by the instructor, must be in education. Mr. Farwell.

Major areas: background and purpose of guidance services and personnel work; techniques used in studying the individual; informational services; counseling services; placement and followup; planning, developing and evaluating a guidance program. Prerequisite for subsequent courses in guidance.

752. Group Procedures in Guidance. Three credit hours. Winter Quarter. Prerequisite, Education 750 or equivalent. Mr. Peters.

Experience in the use of group procedures in guidance. Theories, issues, and trends in group procedures. Selection, organization, and presentation of guidance materials.

MINOR PROBLEMS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

600. Individual Studies in Education. One to four credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, junior standing in the College of Education and twenty credit hours in education and allied subjects of which ten approved by the instructor must be in education.

Permission of the instructor is required.

- (A) Business Education. Mr. Hanna, Miss Wells.
- (B) Adult Education. Mr. Hendrickson, Mr. Nisonger.
- (C) Elementary Education. Miss Streitz, Mr. Burr, Mr. Harding, Mr. Dickson, Mr. Tomlinson.
- (D) Guidance. Mr. Arlesman, Mr. Peters, Mr. Farwell.
- (E) Higher Education. Mr. Anderson, Mr. Hullfish, Mr. Kircher.
- (F) History of Education and Comparative Education. Mr. Sutton, Mr. Mehl.
- (G) Industrial Arts Education. Mr. Haws.
- (H) Industrial-Vocational Education. Mr. Reese.
- (I) Philosophy of Education. Mr. Hullfish, Mr. Kircher.
- (J) Radio and Television Education. Mr. Tyler.
- (K) Secondary Education. Mr. Alberty, Mr. Eckelberry, Mr. Eikenberry, Mr. Mendenhall, Mr. Laughlin.
- (M) Educational Administration. Mr. Heck, Mr. Campbell, Mr. Corhally, Mr. Herrick, Mr. Fleisher.
- (N) Teaching of English. Mr. Seely, Mr. Eberhart.
- (O) Teaching of Foreign Languages. Mr. Tharp.
- (P) Teaching of Mathematics. Mr. Fawcett, Mr. Lazar.
- (Q) Teaching of Sciences. Mr. Caboon, Mr. Haub, Mr. Richardson.
- (R) Teaching of Social Studies. Mr. Griffin, Mr. Jewett.
- (S) Audio-Visual Materials of Instruction. Mr. Dale, Mr. Woelfel, Miss Williams.
- (T) Special Education. Miss Sanderson, Miss Cassidy, Mr. Nisonger, Miss Rosebrook.
- (U) Speech. Mr. Knowler, Miss Sanderson.
- (V) Research Techniques. Mr. Fleisher, Mr. Mooney, Mr. Woelfel, Mr. Dale.
- (W) Library Science. Miss Heller.

PHILOSOPHY AND HISTORY OF EDUCATION

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

607. Philosophy of Education. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, senior standing in teacher education curricula. Open to other senior students and to graduate students only on permission of the instructor. This course should be taken after student teaching or concur-

rently with it. Required of all candidates for the degree Bachelor of Science in Education except that it is open to, but not required of, students who have credit for Education 501 (not to be confused with Education Survey 501). Mr. Hullfish, Mr. Kircher.

A consideration of the distinctive function or purpose of education in the social order and the bearing of this purpose on problems of organization and administration, the selection of subject matter, and classroom procedures.

***624. Social Education.** Three credit hours. Spring Quarter. Lectures and discussions. Enrollment limited to those with at least junior standing or the equivalent. Mrs. Robbins.

Nature and characteristics of social structures and processes as revealed in classroom social climates, groups and grouping arrangements, teacher social roles, and interpersonal relationships. Factors revealing the school as a separate culture: traditions, ceremonies, clubs, athletics, and the like.

632. The History of Western Education. Four credit hours. One Quarter. Autumn, Winter, Spring. Required in the College of Education. Prerequisite, junior standing. Mr. Sutton, Mr. Mehl.

Development of educational systems in the Western world since ancient times. Emphasis on education in its relation to other social institutions and on the continuity of its evolution through the centuries.

Not open to students who have credit for Education 507.

636. Historical Foundations of American Education. Four credit hours. Spring Quarter. Mr. Mehl.

After a brief survey of the colonial beginnings, emphasis will be laid upon the early national period, the expansion after the Civil War, and the reconstruction of American education since 1900. Study of original sources. The evolution of elementary, secondary, and higher education.

757. Conceptions of Mind in Educational Theory. Three credit hours. Autumn Quarter. Prerequisite, senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Hullfish.

A study of the doctrines of mind that have exercised a determining influence upon educational theory and practice.

Not open to students who have credit for Education 610.

758. The Thinking Process in Its Educational Bearings. Three credit hours. Spring Quarter. Prerequisite, senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Hullfish.

A study of the thinking process for the purpose of tracing its implications for educational theory and classroom practice.

Not open to students who have credit for Education 611.

759. Modern Trends in Educational Philosophy. Three credit hours. Winter Quarter. Prerequisite, senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy, or psychology. Mr. Kircher.

A discussion of alternative philosophies and their implications for current educational theory.

Not open to students who have credit for Education 617.

760. Moral Ideals in Religion and Education. Three credit hours. Spring Quarter. Prerequisite, senior standing in the College of Education, or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Kircher.

A consideration of types of moral ideals, of the relation of moral and religious values to school subjects, and to the past and present relationships of religion and public education in the United States.

Not open to students who have credit for Education 620.

775. The History of Educational Thought: Ancient and Medieval. Three credit hours. Autumn Quarter. Prerequisite, four Quarter hours in the history of education. Mr. Mehl.

* Not given in 1956-1957.

Study, analysis, and discussion of some of the major educational treatises written during the ancient and medieval periods. The educational philosophy of Plato, Aristotle, Xenophon, Quintilian, and selected Moslem and Christian writers with consideration of their influence on the subsequent course of educational history.

Not open to students who have credit for Education 635.

776. The History of Educational Thought: Modern. Three credit hours. Spring Quarter. Prerequisite, four Quarter hours in the history of education. Mr. Mehl.

Study, analysis, and discussion of some of the major educational treatises written since 1500 A.D. The educational philosophy of Milton, Locke, Rousseau, Kant, Newman, Spencer, and others, with consideration of their influence on contemporary theory and practice in education.

Not open to students who have credit for Education 635.

777. Comparative Education I: Europe and the English-Speaking Countries. Three credit hours. Autumn Quarter. Prerequisite, four Quarter hours in the history of education. Mr. Sutton.

Social and cultural factors which have made for the differential development of educational institutions and organization in the countries of Europe and in the English-speaking members of the British Commonwealth; comparison with the development of education in the United States.

Not open to students who have credit for Education 638.

778. Comparative Education II: Asia, Africa, Latin America. Three credit hours. Spring Quarter. Prerequisite, four Quarter hours in the history of education. Mr. Sutton.

Social and cultural factors affecting the stability and effectiveness of educational institutions and organization in the many countries where programs of universal education are of recent origin.

SCHOOL LIBRARY SERVICE

***503. Organization and Administration of the School Library.** Three credit hours. Winter Quarter. Miss Heller.

Simple methods of handling essential routines of a school library will be stressed. The course is planned to include processes such as purchase of materials, accessioning, mechanical preparation of books, the establishment of a loan system, and care and repair of books. Adapting the library to fit the needs of the school and community.

521. Children's Literature. For description see page 139 under Elementary Education.

***550. Library Materials for the Secondary School.** Three credit hours. Spring Quarter. Miss Heller.

The object of this course is to develop ability in choice of books for the building of adequate collections for high schools. Includes evaluative criteria for selection; study for book selection aids; printed lists and periodical reviews; comparative study of editions, series, publishers; the reading and reviewing of books in various fields and a comparison of them with other books in the same field. Practice is given in the use of book selection tools and in the preparation of book lists.

***551. Classifying and Cataloging in the School Library.** Two credit hours. Autumn Quarter. Miss Heller.

An introduction to the principles of the cataloging and classification of the simpler types of books with special emphasis upon their application to the school library.

552. Practice Library Work. Five credit hours. One Quarter. Winter and Spring. Prerequisite, Education 503, 550, 551, 646, and 647. Miss Heller.

Designed to bring students into touch with actual library conditions through practice work in approved school libraries. Students will participate in the various library processes and forms of work under supervision and with considerable responsibility. Supplemented by observations in the libraries of the community and by individual and group conferences. A minimum of eight hours of work per week will be required.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

***645. The Library in the Modern School.** Three credit hours. Winter Quarter. Prerequisite, senior standing in Education.

* Not given in 1956-1957.

A course designed primarily for teachers, supervisors, and administrators to acquaint them with the place of the school library in modern education. Objectives of school library service, integration of library and instruction, library standards, selection of personnel, housing and equipment of the library, costs of service, and broader concepts of library materials will be investigated.

646. Enriching Curriculum Units Through Use of Library Materials. Three credit hours. Winter Quarter. Prerequisite, Education 550 or Education 521. Miss Heller.

This course is designed to acquaint the student with library resources and materials of all kinds which will vitalize and give background to typical units of the school curriculum. Includes selection and study of materials correlating with subjects chosen for study in both elementary and secondary schools. Practice will be given in deciding upon appropriate study materials and in making bibliographies for selected subjects. Attempt will be made to show that the same materials may be used to enrich more than one subject.

647. Reference Work in the School Library. Three credit hours. Autumn Quarter. Miss Heller.

The course includes study of the various reference books, such as encyclopedias, dictionaries, atlases, handbooks, gazeteers, and pamphlets, bulletins, government publications, pictures, museum objects, and other audio-visual aids. Practice in handling reference questions is provided.

***648. Library Guidance for Adolescent Readers.** Three credit hours. Spring Quarter. Prerequisite, senior standing in Education. Miss Heller.

A survey of the nature and content of books suitable for use in meeting the recreational reading needs of the adolescent group. The recreational reading program is considered as one cutting across the entire book collection and meeting a variety of interests, including those arising in any teaching area. Emphasis will be placed upon recreational reading as a means of furnishing background for the study of a foreign language, enriching interests arising in social studies classes, extending mathematical understandings, strengthening science interests, correlating with English teaching programs, broadening experiences in the arts, or helping in the solution of personal problems.

Demonstration and discussion of methods of stimulating and directing young people's reading will be provided.

Not open to students who have credit for Education 669.

SECONDARY EDUCATION

The General Field

533. Theory and Practices in Secondary School Teaching. Four credit hours. One Quarter. Autumn, Winter, Spring. Lectures, discussions, and observations of classroom activities on the secondary school level. Required of all students preparing for secondary school teaching. Prerequisite, Psychology 407. Mr. Laughlin and staff.

A study of the secondary school in the light of its historical development, the procedures for providing for individual differences among pupils, the organization of instructional materials, classroom management, general methods, and the planning for pupil activities; also a critical evaluation of current principles and procedures.

534. Theory and Practices in Secondary School Teaching (Continued). Four credit hours. One Quarter. Autumn, Winter, Spring. Lectures, discussions, and observations of classroom activities on the secondary school level. Required of all students preparing for secondary school teaching. Prerequisite, Education 533. Mr. Laughlin and Staff.

This course is based on the principles developed in Education 533 and consists generally of a study of the place of extra-curricular activities in the school program, guidance and school control, measurement, records, and reports; also a study and evaluation of current principles and procedures.

536. Student Teaching in Secondary Schools. Three to fifteen credit hours. Autumn, Winter, and Spring Quarters by special permission of the Coordinator of Student Field Experience. A minimum of nine credit hours is required. Students will determine by consulting with area advisers and the Coordinator of Student Field Experience the number of credit hours for which registration is to be made. Initial registration may be for as little as three credit hours, but in no case may a student accumulate more than twenty-two hours under this course and Education 502, 505, 520, and 537. Open only to students in the College of Education. Mr. Andrews and others.

* Not given in 1956-1957.

Observation, participation, responsible teaching, individual and group conferences.

This course is offered in the following different individual subject areas and students should register under the appropriate section number. Double placements must be indicated accurately with the proper numbers of hours of credit in each of the sections.

Instrumental Music. Three to eight credit hours. Continuation of Education 520A. Required in Music Curricula II and III. Mr. McBride.

536B. Vocal Music. Three to eight credit hours. Continuation of Education 520B. Required in Music Curricula I and III. Mr. McBride.

536C. Fine Arts. Mrs. Mitchell.

536D. German. Mr. Tharp.

536E. Home Economics. Miss Bancroft.

536F. French. Mr. Tharp.

536G. Industrial Arts. Mr. Haws.

536H. Vocational Trades and Industries. Mr. Haws.

536I. Biological Science. Mr. Richardson, Mr. Cahoon.

536J. Business Education. Miss Wells.

536K. Distributive Education. Mr. Logan.

536L. Latin. Mr. Tharp.

536M. Health Education. Miss Schroeder.

536N. English. Mr. Eberhart.

536O. Spanish. Mr. Tharp.

536P. Mathematics. Mr. Lazar.

536Q. General or Physical Science. Mr. Cahoon, Mr. Richardson.

536R. Social Studies. Mr. Jewett.

536S. Physical Education (Men). Mr. Hees.

536T. Physical Education (Women).

536U. Speech. Mr. Rickey.

Application. To obtain admission to any of the sections of this course as indicated below, students must file applications in the Spring Quarter of their third year. Blanks for the purpose are procurable in Room 103, Arps Hall, where the applications are filed. Since Education 536 is not offered in the Winter Quarter in certain fields, students planning to enroll in the Winter Quarter should consult the Time Schedule.

Placements. Similarly at the time of registration for any section of the course, placement cards (procurable in Room 103, Arps Hall) must be filled out. Schedules in which Education 536 appears will not be approved by the Secretary of the College until placement cards have been filled out.

The prerequisites to the course, any section, are as indicated below:

1. Senior standing in the College of Education.
2. Education 533 is prerequisite in the cases of all students pursuing the general, the business, the industrial arts, the home economics, the nursing, the physical education, or the fine arts curriculum.
3. Completion of at least 75 per cent, in terms of aggregate credit hours, of the courses prescribed as subject matter preparation in the chosen teaching field or fields in which student teaching is contemplated.
4. A point-hour ratio of 2.25 in each of the major teaching fields and in the required professional courses, is required regardless of the subject-matter area in which student teaching is contemplated. Students transferring from another College of the University to the College of Education must fulfill the 2.25 point-hour ratio on all courses in their respective teaching fields, regardless of whether such courses were taken before or after transfer. Transfer students coming from other institutions and requesting credit in student teaching will be required to fulfill the 2.25 point-hour ratio before such credit shall be granted. Only credits earned in this University will be taken into account in computing point-hour ratios.
5. Appropriate methods courses are prerequisite, except that in certain cases, they may be taken concurrently with student teaching in the same teaching field or fields. Students should see course descriptions of methods courses and consult area advisers.
6. All students entering the College of Education in the Autumn Quarter 1953 and thereafter must meet the field experience prerequisite for student teaching at least one Quarter prior to the one in which student teaching is taken.
7. Specific area requirements and additional general requirements for admission to student teaching may be obtained in mimeographed form from the Office of Student Field Experience, Room 103, Arps Hall.

537. Supervised Practice in Specialized Forms of Education. Four to fifteen credit hours. Autumn, Winter, and Spring Quarters. Open only by special permission of the Coordinator of Student Field Experience to students

in the College of Education. Prerequisites are the same as for Education 536 and include those given under the respective individual curricula. Applications and placements as in Education 536. Mr. Andrews and others.

The course consists of observation, participation and responsible leadership of pupils and pupil groups in one of the following forms of educational work. Dental hygiene education, nursing education, radio-speech education, school psychological service, speech and hearing therapy, and special education. Enrollment will be in one of the following sections.

537A. Dental Hygiene Education. Mr. Wise.

537C. Radio-Speech Education. Mr. Rickey.

537D. School Psychological Service. Mr. Phelps.

537E. Speech and Hearing Therapy. Miss Sanderson.

537L. Special Education. Miss Rosebrook.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Radio and Television in Education. For description see page 139 under Elementary Education.

602. Audio-Visual Materials of Instruction. For description see page 140 under Elementary Education.

649. Practicum in Problems of Public Education. Three credit hours. This course may be repeated until nine credit hours have been earned. Autumn, Winter, and Spring Quarters.

Open only to experienced teachers, administrators and supervisors with junior standing or above. Groups must be organized around specific problems and available staff. Requests from school systems must be received by the department chairman far enough in advance to allow ample time for planning.

676. Teaching in the Core Program in the Secondary School. Three credit hours. Autumn Quarter. Mr. Laughlin.

A course for prospective teachers and teachers in service who are interested in learning how to work effectively in schools which utilize the core curriculum type of organization. A critical study will be made of current practices in the field, through analysis of existing curricula and procedures and through observations of and participation in the core program of the University School. Careful consideration will be given to the technique of selecting and organizing course materials and to the co-operative planning of units of work. The group will undertake building at least one resource unit.

699. Student Activities in the Secondary School. Three credit hours. Spring Quarter. Prerequisite, junior standing in the College of Education and twenty Quarter hours credit in education or allied subjects of which ten must be in education. Mr. Eikenberry.

The place of 'extra-curricular' activities in the secondary school program. Consideration will be given to home-room activities, pupil participation in school government, assemblies, clubs, publications, debating and dramatics, athletics, honor societies, social activities, control of participation in activities, and financial administration of activities. Of special interest to high school teachers and high school principals.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Teaching of English

663. Language-Composition Materials for High School Teachers. Three credit hours. Spring Quarter. Lectures, readings, oral and written composition experiences. Recommended for all English majors and minors and open to all prospective high-school teachers. Prerequisite, English 416, 417, 418 or 401, 430. Mr. Eberhart.

The purpose of the course is three-fold. (1) to enable students further to master the fundamental principles of language usage commonly included in the secondary-school curriculum; (2) to acquaint them with language source materials; (3) to enable them to secure some experience in the language activities peculiar to the work of the high-school teacher.

Not open for graduate credit.

Not open to students who have credit for Education 541.

669. Literary Materials for English and the Social Studies. Three credit hours. Autumn Quarter. Lectures, readings, and problem assignments. Recommended for students planning to teach English, history, or social studies in junior or senior high schools. Mr. Eberhart.

The course is designed: (1) to acquaint English teachers with a wide variety of novels, short stories, poems, plays, biographies, and essays which are especially suitable for pupils in junior and senior high school, and (2) to familiarize teachers of history and social studies with literary selections which serve to illuminate typical subjects of study in these fields. Consideration will be given to standards for the selection of literary materials and the use of these materials and the secondary school curriculum.

670. Teaching Literature in the High School. Five credit hours. One Quarter. Autumn and Spring. Five lectures each week. Lectures, readings, participation. Required of students majoring in English who have reached at least the third Quarter of their junior year. Prerequisite, thirty of the forty required hours of English; Education 533, 534; except that, by permission of the instructor, Education 534 may be carried concurrently with Education 670. Mr. Seely.

Emphasis is given to such matters as the objectives of the high school literature program; criteria for the choice and grade-placement of literature in high school; specific methods suitable for teaching the various types of literature; the correlation of the activities in literature with those in the language aspects of the English studies; the interrelations between literature and other phases of the curriculum.

Not open during Summer Quarters to undergraduate students who have had no teaching experience.

671. Teaching the English-Language Studies in High School. Five credit hours. One Quarter. Autumn, Winter, Spring. Lectures, readings, participation. Required of students majoring or minoring in English who have reached at least the third Quarter of their junior year. Prerequisite, English 416, 417, 418, 550, 563, 564; Education 533, 534; except that, by permission of the instructor, Education 534 may be carried concurrently with Education 671. Both Education 671 and 670 should be carried prior to student teaching in English, but one of these courses may be carried concurrently with student teaching. Mr. Seely.

Emphasis is given to such matters as the objectives of the English-language studies in high school; the teaching of the language mechanics; the teaching of the various types of oral and written composition; the role of the school as a whole in promoting students' language competence.

Not open during Summer Quarters to undergraduate students who have had no teaching experience.

†674. The Supervision of Journalism in Secondary Schools. Three credit hours. Prerequisite, Education 533 or equivalent.

This course is designed for persons who have been teaching journalism in secondary schools, or who act as faculty advisers for school newspapers, magazines, or annuals. It includes a general survey of the editorial, publishing, and mechanical phases of school newspapers and other publications with emphasis on the aspects which are of particular value to teachers.

Not open for graduate credit to graduate students majoring in journalism.

Teaching of Foreign Languages

***690. The Teaching of German.** Three credit hours. Winter Quarter. Three recitations each week: observations. Required of all students who intend to complete a teaching major or minor in German. Prerequisite or concurrent, Education 533, and six Quarters of college German. Students must have reached the third Quarter of their junior year. Given in alternate years. Mr. Goodman.

Values. Critical study of objectives and methods. Textbook selection. Classroom procedures. Readings, discussions, and reports.

691. The Teaching of English as a Foreign Language. Three credit hours. Spring Quarter. Lectures, demonstrations, readings, observations.

* Not given in 1956-1957.

† Not given during the academic year, 1966-1957.

Open to Juniors and Seniors majoring or minoring in a modern foreign language and, permission of the instructor, to properly qualified students, such as mature, experienced teachers, or foreigners preparing to teach English to their own nations. Mr. Tharp.

Problems and scope of teaching English to foreigners. English considered as a foreign language, materials and methods.

692. Methods and Techniques of Teaching Romance Languages. Two to seven credit hours. Education 692 may be taken more than once provided the total credit received does not exceed seven hours. Prerequisite, or concurrent, Education 533 and admission to a major or minor in French or Spanish. Students must have reached the third Quarter of their junior year. Section A is required of all students who intend to complete a teaching major or minor in a Romance Language. Section B is optional, but it should be elected if possible concurrently with student teaching. Mr. Tharp.

Section A. Five credit hours. Autumn Quarter. Five meetings each week, with observation in a high school class. Lectures, readings, discussions and conferences. Values; objectives; textbook analysis; examinations and marking; professional advancement. Demonstrations and practical problems in methods of teaching grammar, pronunciation, and reading.

Section B. Two credit hours. Spring Quarter. One two-hour meeting each week. Choice of course content; preparation of teaching materials; evaluation of classroom procedures. Practice in use of audio-visual aids, songs, folkdances and all types of regalia.

694. The Teaching of Latin. Three credit hours. Spring Quarter. Three recitations each week: observations. Required of all students who intend to complete a teaching major in Latin. Prerequisite or concurrent, Education 533, and six Quarters of college Latin. Students must have reached the third Quarter of their junior year. Mr. Titchener.

Values. Teacher's equipment, objectives and methods. Classroom procedure. Lectures and assigned readings.

Teaching of Mathematics

659. Teaching of Mathematics in the Secondary Schools. Three credit hours. Autumn Quarter. Three lectures each week, with observation and active participation in junior high school mathematics classes for at least ten hours during the Quarter. Prerequisite, Education 533, and twenty hours of mathematics or the equivalent. Required of students in the College of Education who intend to complete a teaching major or minor in mathematics. Mr. Fawcett.

A consideration of the role of mathematics in general education and the relation of mathematics to other fields of learning. The selection of concepts, understandings, appreciations, and skills from arithmetic, informal geometry, and elementary algebra that are especially important for junior high school pupils. A detailed consideration will be given to related teaching procedures.

Not open to students who have credit for Education 687.

660. Teaching of Mathematics in the Secondary Schools. Three credit hours. Winter Quarter. Three lectures each week, with observation and active participation in senior high school mathematics classes for at least ten hours during the Quarter. Prerequisite, Education 533 and twenty hours of mathematics or the equivalent. Required of students in the College of Education who intend to complete a teaching major or minor in mathematics. Mr. Lazar.

The selection of concepts, understandings, appreciation, and skills from demonstrative plane geometry, intermedit and advanced algebra, solid geometry, and trigonometry. A detailed consideration will be given to related teaching procedures.

Not open to students who have credit for Education 687.

NOTE: This course can be taken prior to or independently of 659.

689. Field and Laboratory Work for Teachers of Mathematics. Three credit hours. Spring Quarter. Demonstrations, field work, projects, readings, laboratory work and participation in University School mathematics classes.

Recommended for students in the College of Education who are majoring or minoring in mathematics. Prerequisite, a major or minor in mathematics and Education 659 and 660 or the equivalent. Mr. Lazar.

Actual experience with instruments and apparatus in field and laboratory work suitable for boys and girls in the junior and senior high schools. The use of devices and apparatus including the slide rule, the plane table, the alidade, the transit, the angle mirror, the sextant, the hypsometer and clinometer for teaching concepts and skills needed in elementary surveying and mapping. Field and laboratory work and demonstrations will be carried out illustrative of teaching procedures applicable to secondary school classes.

761. Materials for Teaching Secondary School Mathematics. Three credit hours. Spring Quarter. Lectures, problem assignments, readings, and participation in the University School mathematics classes. Recommended for students in the College of Education majoring in mathematics. Education 659 and 660 must be included in the prerequisites or taken concurrently.

Planned to give teachers and prospective teachers of mathematics an enlarged concept of and first-hand experience with important materials and sources useful in providing worthwhile experiences for pupils to secondary schools. Topics include the development and use of important concepts in mathematics, key sources of materials, tests and evaluation instruments. Students will be expected to collect, construct, and organize materials for their own mathematics classes.

Not open to students who have credit for Education 688.

762. The Teaching of Algebraic Concepts. Four credit hours. Winter Quarter. General prerequisites must include Education 659 and 660 or the equivalent. Mr. Lazar.

A course dealing with the role of algebra in the secondary school, including a consideration of significant experiments in the teaching of this subject, major understandings and outcomes, the selection of appropriate topics, the development of rational thinking, and the evaluation of outcomes.

Teaching of Nursing

590. Foundations of Nursing Education. Three credit hours. One Quarter. Autumn and Spring. Lectures and discussions. Prerequisite, Psychology 401 and 407, and Sociology 410 and 401. Miss Hudson.

Consideration will be given to the historical development of nursing education, the surveys used to evaluate its progress, levels of nursing, and the essential characteristics of a good school of nursing.

NOTE: For course in Supervised Teaching in Nursing, see the Department of Nursing, Course 661.

Teaching of Science

540. Problems in the Teaching of Biological Science. Three credit hours. Autumn Quarter. Two one and one-half hour periods each week. Prerequisite, twenty hours of biological science. Recommended for students who expect to teach biological science or general science. Mr. Haub, Mr. Jones.

A course for teachers designed to give them first-hand experience in planning field work; collecting materials for class use; rearing of collected organisms; preserving specimens for class or museum; using of simple apparatus and devices in demonstrations; and ways of equipping a biology room at little cost.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

680. Science Materials for Junior and Senior High Schools. Three credit hours. Winter Quarter. Lectures, readings, problem assignments, and participation in the University School science classes. Recommended for students specializing in physical or general science in the College of Education. Prerequisite, a major or minor in science and Education 648, or the equivalent. Mr. Cahoon.

This course is planned to give teachers of junior and senior high school science experience with significant teaching materials. Emphasis is placed upon planning, use, and evaluation of use. Visual and auditory materials, evaluation instruments, and materials useful to critical thinking are utilized. Sources and their evaluation are stressed. Materials are obtained, prepared and organized for use in science classes.

681. Laboratory Practicum for Teachings of Science. Two to five credit hours. Education 681 may be taken more than once provided the total credit received for Education 681 (539) does not exceed five Quarter hours. Winter Quarter. Demonstrations, laboratory work, construction of apparatus. Prerequisite, Education 683 or 684 or equivalent, and major or minor in one or more of the following: physics, chemistry, physics-chemistry, general science, biology. Mr. Cahoon.

Students have experience with such techniques as glass blowing, wood and metal working, and those of electrical, photographic, and chemical nature as they are related to apparatus, materials, and tools used in science courses in secondary and elementary schools. The preparation, assembly, and construction of demonstration and laboratory apparatus and visual aids are related to their use in science teaching. The work is adapted to the individual needs and concerns of students.

†682. Field Laboratory in Conservation Education. For description see page 159 under Workshops and Field Experience.

683. The Teaching of Biology. Three credit hours. Spring Quarter. Three recitations each week: observations. Required of all students specializing in biology in the College of Education. Prerequisite or concurrent, Education 633; prerequisite, Botany 401-402, Zoology 401-402, and at least two additional Quarters of some biological subject. Mr. Haub, Mr. Jones.

This course is given primarily for the students in the College of Education who expect to teach high school biology. The work will include lectures and demonstrations by the students of the best methods of presenting botany, zoology, and biology to high school students.

684. The Teaching of General and Physical Science. Three credit hours. One Quarter. Autumn and Spring. Lectures, readings, observations, and participation in the University School science classes. Required of students specializing in physical or general science in the College of Education. Prerequisite or concurrent, Education 533 and a major or minor in physics, chemistry, physics-chemistry, astronomy, or general science. Mr. Cahoon.

A study of the problems and techniques in the teaching of general and physical science courses in junior and senior high schools. Objectives, planning, use of demonstrations and laboratory experiments, texts and reference materials, pupil projects, trips, teaching and evaluating scientific thinking, directed study, visual aids, professional literature.

***706. Problems in Teaching and Supervising Science in the Junior and Senior High School.** Four credit hours. Spring Quarter. Lectures, student reports, laboratory. Prerequisite, teaching or supervising experience or ten hours of graduate work in secondary or elementary education and Education 684 or 680. Mr. Cahoon.

Planned for teachers who are working with student teachers in their classes, or who expect to work with student teachers, and for those concerned with the supervision of teacher training programs in the science area. Objectives, curricula, recent trends, planning "lessons" and pupil experiences, techniques, classroom management, sources of teaching aids, evaluation of teaching professional literature.

Teaching of Social Studies

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

669. Literary Materials for English and the Social Studies. For description see page 147 under Teaching of English.

677. The Teaching of the Social Studies, I. Five credit hours. One Quarter. Autumn and Spring. Five lectures each week; observations. Open to Juniors and Seniors specializing in the social studies and, with the permission of the instructor, to other properly qualified students. Required for those who intend to complete a teaching major in the social studies. Prerequisite, twenty hours in the social studies and Education 533 or its equivalent. Mr. Griffin.

† Not given during the academic year, 1956-1957.

* Not given in 1956-1957.

An examination of different theories of the role of social studies materials within the learning process, with particular attention to their impact upon the beliefs, attitudes, and values of secondary school students. Illustrative material will be drawn primarily from history, with some attention to the other social studies. Special emphasis is given to the use of social studies materials in clarifying the contrast between authoritarianism and democracy, to the function of information within the reflective process, and to the possible contribution of the social studies teacher within the core curriculum.

NOTE: Normally this course should precede student teaching, but with the consent of the instructor it may be taken concurrently.

678. The Teaching of the Social Studies, II. Three credit hours. One Quarter. Autumn and Winter. Lectures, discussions, observations. Open to Juniors and Seniors majoring in the social studies and, with permission of the instructor, to other properly qualified students. Required of all who intend to complete a teaching major in the social studies. Prerequisite, twenty hours in the social studies and Education 533 or its equivalent. Mr. Jewett.

A continuation of Education 677. The illustrative materials will be drawn primarily from the fields of economics, sociology, and political science, with some attention to geography and anthropology.

NOTE: Normally this course should precede student teaching, but with the consent of the instructor it may be taken concurrently.

Teaching of Speech

612. Methods in Speech and Hearing Therapy I. Three credit hours. Spring Quarter. Prerequisite, twenty hours of Speech; Education 533; Education 516 or its equivalent (may be taken concurrently).

The nature and extent of "case load" relationship of therapy to instruction; lesson plans; evaluation of individual progress; professional relationships; observations and child study.

613. Methods in Speech and Hearing Therapy II. Three credit hours. Winter Quarter. Prerequisite, twenty hours of Speech; Education 533; Education 516 (may be taken concurrently). Required of all majors in speech and hearing therapy.

Application of classroom materials to therapy. Consideration of individuals with multiple handicaps and of individuals with speech or hearing difficulties. Records, reports, interviewing, and home visitations. Equipment needed by therapists.

627. The Teaching of Speech in Secondary Schools. Three credit hours. Autumn Quarter. Prerequisite, Education 533 and twenty hours of speech. Required of all majors in General Speech Education. Mr. Rickey.

A course dealing with the teaching of discussion, debate and public speaking in secondary schools. The relationship of speech to the total school program is emphasized.

Not open to students who have credit for Education 675.

628. The Teaching of Dramatics, Oral Interpretation and Choral Speaking in Secondary Schools. Three credit hours. Winter Quarter. Prerequisite, Education 533 and twenty hours of Speech. Required of all majors and minors in General Speech Education.

How to organize and conduct classes in educational dramas. The place of oral reading, choral speaking, and extra-class dramatic activities in secondary school programs.

Not open to students who have credit for Education 675.

SPECIAL AND ADULT EDUCATION

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Special Education

666. Introduction to the Education of the Mentally Retarded. Three credit hours. Autumn Quarter. Prerequisite, Psychology 609 and seventeen Quarter-credit hours in Education and allied subjects or the equivalent. Miss Rosebrook.

This course is a critical study of the various methods which are used in teaching the mentally retarded; an evaluation of the research underlying these methods.

Not open to students who have credit for Education 765.

667. Methods of Dealing with Exceptional Children in Schools. Three credit hours. Winter Quarter. Two class meetings and one two-hour laboratory each week. Prerequisite, Psychology 609. Miss Rosebrook.

This course is designed for elementary and secondary teachers, and administrators.

A review and evaluation of procedures, methods, and type of organization which may be utilized and developed to serve the needs of exceptional children within the school and classroom situations.

764. Supervised Teaching in Special Classes. Five credit hours. One Quarter. Autumn, Winter, and Spring. Prerequisite, Education 536 and 515-517-518, Psychology 609, or consent of the instructor. Students should consult the instructor before enrolling in this course. This course is given only upon special request. Miss Rosebrook, Miss Cassidy, Miss Sanderson.

Practice teaching for qualified students in classes for the mentally retarded, for behavior problem children, for the defective in speech, or for the deaf and the hard of hearing.

Students will be expected to devote one-third of their time, under the supervision of the University instructor in charge, to this course.

†766. Principles and Methods of Teaching Behavior Problem Children. Three credit hours. Autumn Quarter. Prerequisite, Psychology 609, junior standing and twenty Quarter-credit hours in education and allied subjects of which ten approved by the instructor must be in education. Miss Rosebrook.

A critical study of principles and methods used in the adjustment of behavior problem children.

772. Preparation of Handicapped Children for Post-School Adjustments. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Education 667 or equivalent. Mr. Nisonger.

A study of what schools can do for handicapped children through education, guidance, work experience, placement, and follow-up in helping them make successful adjustments to employment, family and community living. This will include a review of the research studies on the post-school adjustment of handicapped children who have had special education services and those who have not.

773. Practicum in Program Planning for Slow-Learning Children. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, senior or graduate standing, Education 666 or the equivalent. Miss Rosebrook.

A critical appraisal of the philosophy and of the underlying social and economic factors in planning programs for slow-learning children from the kindergarten through secondary levels. A study of the content, procedures, and resources are included.

Adult Education

770. Adult Education. Three credit hours. One Quarter. Autumn and Winter. Open only to seniors and graduate students. Mr. Hendrickson.

A study of the nature, extent, and significance of adult education. Consideration of the psychological characteristics of the adult, influences of social and economic factors on adult needs, history and types of adult education, present trends, future development.

771. Parent Education. Three credit hours. Winter Quarter. Mr. Hendrickson.

A study of the nature, extent, and significance of the parent education movement; home and school relationships in the education of children; methods and resources in parent education; facilities for training professional and lay leaders; place of school administration and teachers in parent education; state programs of parent education.

Open only to Seniors and graduate students.

774. Discussion Methods in Adult Education. Three credit hours. Winter Quarter. Open only to graduate students who have had twenty hours in Education, Agricultural Education, Psychology or Social Administration. A course for both leaders and those who train leaders of adult groups in "Y's," libraries, nursing education, agricultural extension, public school adult programs, social work, and in other areas of adult group work. Mr. Hendrickson.

Consideration will be given to the various forms of discussion as applied to adult groups,

† Not given during the academic year, 1956-1957.

and students will be given actual practice in managing various kinds of discussion groups such as the round table, the forum, the panel, the symposium, and the informal discussion. Clinical analysis of individual difficulties will be made where necessary.

NOTE: For additional courses in special and adult education, see Bureau of Special and Adult Education, page 116.

For description of graduate courses in this department see the Bulletin of the Graduate School.

VOCATIONAL AND PRACTICAL ARTS EDUCATION

Business Education

401-402-403. Beginning Typing. No credit. 401 offered Autumn Quarter only; followed by 402 in the Winter Quarter and 403 in the Spring Quarter. Four one-hour class-laboratory periods each week. Required in the second year of all students majoring in Business Education who lack proficiency required for admission to Education 471. Elective only by other students (a) declaring a minor or teaching field in Business Education, (b) declaring a major in Secretarial Service, or (c) within limits of instructional and equipment facilities. Miss Harrison, Mr. Steinbaugh.

Placement tests for students having had previous training in typewriting will be given during the first class meeting of 401, 402, and 403. Students reporting for placement tests need not be registered in the course.

404-405-406. Beginning Shorthand. Two credit hours each. 404 offered Autumn Quarter only; followed by 405 in the Winter Quarter and 406 in the Spring Quarter. Four one-hour class periods each week. Required in the second year of all students majoring in Business Education who lack proficiency required for admission to Education 471. Elective only by other students (a) declaring a minor or teaching field in Business Education, (b) declaring a major in Secretarial Service, or (c) within limits of instructional and equipment facilities. Mr. Steinbaugh.

Placement tests for students having had previous training in shorthand will be given during the first class meeting of 404, 405, and 406. Students reporting for placement tests need not be registered in the course.

471-472-473. Advanced Shorthand, Typewriting, and Transcription. Four credit hours each Quarter. Autumn (471), Winter (472), Spring (473). Four two-hour periods each week consisting of lectures, demonstration and laboratory. Required of all students majoring in Business Education and elective only by other students (a) declaring a minor or teaching field in Business Education, (b) declaring a major in Secretarial Service, or (c) within limits of instructional and equipment facilities, by permission of the Secretary of the College of Education. Prerequisite, junior standing in the College of Education or sophomore standing in the College of Commerce and Administration. Miss Rusher.

This course will integrate technical shorthand and typewriting as instrumental to general secretarial service and business office practice through the use of business reports, forms and communications.

Students desiring to enroll in this course should have Education 403 and 406 or satisfactory completion of proficiency examinations in shorthand and typewriting which are given at the first class meeting of Education 401, 402, 403 and Education 404, 405, 406.

542. The Teaching of Stenographic and Clerical Subjects. Three credit hours. Autumn Quarter. Prerequisite, senior standing, Education 533 and Education 403 and 406 or the equivalent. Required of all students who intend to complete a comprehensive teaching major in business education or a teaching minor in Stenography-Typing. Miss Wells.

A study of the problems and techniques in the teaching of shorthand, typewriting, business English, transcription, and clerical and stenographic practice. The course will include a critical study of objectives, methods, classroom procedures, materials, and the place of business education in the total program of education. Readings, discussions, and reports.

Not open to students who have credit for Education 721.

543. The Teaching of Bookkeeping and the Basic Business Subjects. Three credit hours. Autumn Quarter. Prerequisite, senior standing, Education 533 and Accounting 402. Required of all students who intend to complete a comprehensive teaching major in business education or a teaching minor in Bookkeeping-social business. Miss Wells.

This course will be devoted to a critical study of the objectives, methods, classroom procedures, and materials for teaching bookkeeping, general or consumer business, business law, business arithmetic, business economics, and business organization and management. It will include a consideration of the contributions of basic-business education in general education. Readings, discussions, reports.

Not open to students who have credit for Education 721.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

722. Principles of Business Education. Three credit hours. Autumn Quarter. Mr. Hanna.

For teachers of business subjects in the junior or senior high schools. Meaning, purpose, and scope of business education in secondary schools. Importance of and procedure in making occupational surveys in the field of business education.

***723. Organization and Teaching of Office Practice.** Two credit hours. Miss Wells.

A consideration of the aims and content of office practice courses in the secondary school, with plans and techniques for organizing the teaching of subject matter of the course and its laboratory material.

A special office practice laboratory will be maintained where all members of the class will have an opportunity, through participation, to evaluate teaching materials and outcomes, and study various types of class organization.

***724. Administration and Supervision of Business Education.** Three credit hours. Mr. Hanna.

A course designed for administrators and supervisors of business education in the junior and senior high school. Courses of study; laboratory facilities, selection and improvement of teachers in service; and other major executive problems.

Distributive Education

780. Methods of Teaching Distributive Education. Three credit hours. Winter Quarter. Prerequisite or concurrent, at least twenty hours of Education, and twenty-five hours in Business Organization, Accounting, Economics. Mr. Logan.

The organization and preparation of teaching plans for distributive education classes; analysis of current on-the-job training methods in business establishments.

***781. Curriculum Content for Distributive Occupational Subjects.** Three credit hours. Winter Quarter. Prerequisite or concurrent, at least twenty hours of Education, and twenty-five hours in Business Organization, Accounting, Economics. Mr. Logan.

Securing, evaluating, and organizing instructional material and experiences for distributive cooperative education, and adult extension courses. A study of job descriptions of retail, wholesale, and service occupations is made, as these apply to the development of course content.

782. Organization and Administration of Education for the Distributive Occupations. Three credit hours. Winter Quarter. Prerequisite or concurrent, at least twenty hours of Education, and twenty-five hours in Business Organization, Accounting, Economics. Mr. Logan.

A practical study of the development and operation of a distributive education program; personnel training in the field of distribution, use of advisory committees, functions of the training agency, operation of adult extension programs, evaluation of distributive education, and public relations.

* Not given in 1956-1957.

Industrial Arts Education

440. The Laboratory of Industries. Four credit hours. Autumn Quarter. Five two-hour lecture and laboratory periods each week. Required in Industrial Arts Education. Mr. Warner.

Orientation in various industrial tools, machines, materials, processes and products through visitation, reading, discussion, experimentation and participation in planning and executing industrial arts laboratory problems reflecting technology.

441-442. Element of Woodworking. Four credit hours each. 441, Autumn Quarter. 442, Winter Quarter. Education 441 is prerequisite to Education 442. Five two-hour lecture and laboratory periods each week. Required in Industrial Arts Education. Mr. Towers. Mr. Stephenson.

Experiences in planning and developing skills and knowledge pertaining to the construction of articles made of wood, and a study of the industries involved.

443-444. Elements of Metal Working. Four credit hours each. 443, Spring Quarter; 444, Winter Quarter. Education 443 is prerequisite to Education 444. Five two-hour lecture and laboratory periods each week. Required in Industrial Arts Education. Mr. Towers.

Experiences in planning and developing skills and knowledge pertaining to the construction of articles made of metal and a study of the industries involved.

445. Elements of Printing. Four credit hours. Winter Quarter. Five two-hour lecture and laboratory periods each week. Required in Industrial Arts Education. Mr. Stephenson.

Experience in letter press, planography, and miscellaneous process of printing, binding, and an over-view of the graphic arts industry.

446. Elements of Electricity in Industrial Arts. Four credit hours. Spring Quarter. Five two-hour laboratory and lecture periods each week. Required in Industrial Arts Education. Mr. Thiel.

An introduction to the principles and practices of electricity and electronics as these apply to industrial arts programs in secondary schools, and a study of the industries involved.

460. Problem Handling in Industrial Arts. Three credit hours. Spring Quarter. Two two-hour periods each week for lecture and laboratory. Required in Industrial Arts Education. Prerequisite, Engineering Drawing 400 or 401. Mr. Stephenson.

Planning of problems involving different materials and activities suitable for development in the program of the laboratory of industries. Special consideration of materials, style, construction, function, and adaptability as laboratory projects.

522. Industrial Arts Laboratory for Teachers in Elementary Education. For description, see page 139 under Elementary Education.

547. The Teaching of Driver Education. Three credit hours. One Quarter. Autumn and Spring. Prerequisite, senior standing in the College of Education, a valid driver's license, and Education 533. One two-hour lecture and recitation period, and one two-hour laboratory period each week. Mr. Towers.

A course designed to prepare teachers to organize and conduct classes in driver training in the secondary schools. Methods of teaching, scheduling, observations and demonstrations, and experience in teaching an inexperienced person to drive, using a dual control car.

Graduate of the College of Education who have completed this course will be eligible for certification to teach Driver Training courses in the secondary schools of Ohio.

581. Work Experience in Industry. Three to seven credit hours. Autumn, Winter, and Spring Quarters. Mr. Haws, Mr. Warner.

Ten or more weeks of work in a job in an industry both of which have been previously approved by the student's adviser in industrial arts to be taken between the third and fourth or sixth and seventh Quarters of work followed by a written and oral examination. This course may be repeated until ten hours have been earned. In no case shall accumulations of credit hours in excess of twenty-two under the heads of Education 506, 536, 581 be permitted. Open only to majors in industrial arts and trades and industries.

The purpose of this course is to provide students with a knowledge of working conditions

in industry and their implications for the teaching of industrial arts. Each student must keep a notebook in which a daily account of the work done is recorded, the methods employed, difficulties encountered and how these were solved. A weekly report of his progress must be submitted to his adviser, followed by a written examination to be given in the ensuing Quarter. At the same time the notebook must be submitted, and be accompanied by a statement from the employer concerning the quality of the student's work and the attitudes shown.

585. The Handicrafts. Four credit hours. Autumn, Winter, and Spring Quarters. Five two-hour periods for lectures and laboratory. This course may be repeated until twelve quarter credits have been earned. Required in occupational therapy and industrial arts education; a recommended elective in social administration, home economics, and physical education. Mr. Theil.

Development of skills, knowledge, and procedures in the use of hand tools and simple machines working with a wide variety of materials. Special attention will be given to development of appropriate teaching procedures and aids, also developments of suitable projects for school and recreational activities.

†641. History of Vocational Education and the Practical Arts. Three credit hours. Autumn Quarter. Prerequisite, junior standing in the College of Education or in the Department of Agricultural Education or in Home Economics, and twenty hours in education and allied subjects of which ten must be in the College of Education or the teaching courses in Agriculture or Home Economics. Mr. Warner.

The history and theory of activities related to agriculture, business, industry, and home making as a part of education, and their relation to the general theory and practice of education.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

655. Industrial Arts in the Elementary Schools. Three credit hours. Winter Quarter. Required of majors in Industrial Arts Education. Prerequisite, Education 440 or 552 or equivalent. Mr. Warner.

First-hand study of typical modern industries as one means of developing understanding and insight into social and economic backgrounds and their implications. Nature and purposes of industrial arts in the program of elementary education. Selection, study, and development of many typical problems with reference to the various levels of the elementary school.

679. The Teaching of Industrial Arts. Three credit hours. Autumn Quarter. Five recitation periods each week; observations. Required in Industrial Arts Education. Prerequisite, Education 533. Mr. Haws.

The nature and extent of industrial arts in the total program of education, organization and development of curricular materials, methods of teaching including observations and demonstrations, purposes and techniques of evaluation, the teacher and his profession.

Not open for graduate credit.

697. Graphic Representation for Industrial Arts Teachers. Three credit hours. Autumn Quarter. Four two-hour laboratory periods each week: observations. Prerequisite, Engineering Drawing 400 or 401. Mr. Philby.

Advanced projection study of points, lines, and planes as related to the geometry of drawing. Analysis of presentation of problems in orthographic projection. Technical sketching of working drawings, and production illustration. Expressive lettering and its application to poster layout.

Not open for graduate credit.

698. The Teaching of Technical Drawing. Three credit hours. Winter Quarter. Four two-hour laboratory periods each week; observations. Required in Industrial Arts Education. Prerequisite, Education 533 and 697. Mr. Philby.

Problem design and evaluation. Methods of reproduction of problems for class use. Planning a secondary-school course in drawing. Methods of grade recording, evaluation, and determination. Laboratory layout of equipment and physical features. Correlation with shop problems and practices.

Not open for graduate credit.

†714. Selection and Organization of Subject Matter in Industrial Educa-

† Not given during the academic year, 1956-1957.

tion. Three credit hours. Spring Quarter. Three recitation periods each week. Prerequisite, senior standing in the College of Education and twenty Quarter-credit hours in education, or permission of the instructor. Mr. Haws.

Principles and practice in defining specific area and course objectives and their relationships to the objectives of general education. General and specific criteria and controls determining the selection of subject matter and activities. Techniques of analysis applied to various industrial activities for the selection of facts and activities conducive to acquisition of desirable knowledge, skills, and behavior, and the organization of such materials into integrated courses of study and formulation of teaching plans.

715. Laboratory Planning and Equipment Selection in Industrial Arts. Three credit hours. Winter Quarter. Seven periods each week for lecture and laboratory. Required in Industrial Arts Education. Prerequisite, junior standing or permission of the instructor. Mr. Warner.

Analysis of problems and standards involved in planning rooms and practice in the selection, design, location, installation, and care of equipment in various high school industrial arts laboratories or vocational shops.

***716. Organization and Administration of Industrial Education.** Three credit hours. Winter Quarter. Prerequisite, senior standing and twenty Quarter hours in education and allied subjects, of which ten hours must be in education. Mr. Warner.

Relation of industrial arts and vocational education to the general curriculum and the administrative responsibilities entailed. Courses of study; relative costs; coordination problems; class and shop organization, and the development of an effective program of supervision. Selection of teachers and their improvement in service. Of interest to school administrators and teachers of industrial arts and vocational-industrial subjects.

Not open to students who have credit for Education 857.

NOTE: For survey of Vocational Education, see Education 717 under Trade and Industrial Education.

Trade and Industrial Education

575. Trade and Industrial Education: Job and Trade Analysis. Three credit hours. One Quarter. Autumn, Winter, Spring. One lecture and two two-hour laboratory periods each week. Required of students applying for certification to teach vocational classes or in vocational schools, or majoring in the vocational curriculum. Mr. Cotrell.

Study of procedures in making occupational analyses. Problems in making one or more detailed analyses.

576. Trade and Industrial Education: Organization of Instructional Material. Three credit hours. One Quarter. Autumn, Winter, Spring. Three recitations, and discussion periods each week. Prerequisite, junior standing in the College of Education and twenty Quarter-credit hours in education, or permission of the instructor. Mr. Cotrell.

Principles and practice in determining purposes and in selecting and organizing course materials into an integrated program of studies.

577. Trade and Industrial Education: Teaching Methods. Three credit hours. Autumn Quarter. Three lectures and discussion periods each week. Required of students applying for certification to teach vocational classes or in vocational schools, or majoring in the vocational curriculum. Mr. Cotrell.

A study of the purpose, procedures and problems in teaching industrial subjects, including observation, demonstrations and psychological applications.

578. Trade and Industrial Education: Vocational Tests and Measurements. Three credit hours. Winter Quarter. One lecture and two two-hour laboratory periods each week. Required of students applying for certification to teach vocational classes or in vocational schools; or those majoring in the vocational curriculum. Mr. Cotrell.

Standard aptitude tests and their uses; methods of constructing tests for use in shop and related courses.

* Not given in 1956-1957.

579. Trade and Industrial Education: Shop Management. Three credit hours. Spring Quarter. Three lecture and discussion periods each week. Required of students applying for certification to teach vocational classes or in the vocational curriculum. Mr. Cotrell.

An intensive study of the problems of shop management, including selection, installment, maintenance and safe operation of shop equipment.

580. Trade and Industrial Education: The Conference Method of Teaching. Three credit hours. Spring Quarter. Three lecture and discussion periods each week. Required of students applying for certification to teach vocational classes or in vocational schools, or those majoring in the vocational curriculum. Mr. Cotrell.

A study of the theory and practice followed in leading a conference with a critical analysis and discussion of the problem involved. Practice in organizing and conducting a conference teaching situation.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

695. Problems in Teaching and Supervising Trade and Industrial Education for Out-of-School Youth and Adults. Three credit hours. Autumn Quarter. Open to Juniors and Seniors majoring in industrial education, and with permission of the instructor, to other properly qualified students. Mr. Reese.

An analysis of the factors fundamental to the effective operation of vocational programs for out-of-school groups. Emphasis will be given to the educational, economic and social needs of adult students; facilities, subject matter, instructional methods, teacher education, supervision, coordination, records and reports, types of programs and relationships.

†717. Survey of Vocational Education. Three credit hours. Open to superintendents, secondary school principals, supervisors of industrial arts, supervisors of vocational education, guidance workers, teachers of industrial arts and vocational education. Mr. Brandon and staff and members of the Division of Vocational Education of the State Department of Education.

A survey of the five areas of instruction within the federal and state program of vocational education; agriculture, home economics, trades and industries, distributive education, vocational guidance. Emphasis will be placed on the philosophy of vocational education, state and federal legislation, and patterns of education affecting in-school, out-of-school, and adult groups. Analysis and appraisal of existing programs within Ohio; discussion of problems, practices and procedures. Relationships and needed developments.

WORKSHOPS AND FIELD EXPERIENCE

502. Interpretation of Field Experience in Schools. Two credit hours. Autumn Quarter. Prerequisite, Education Survey 407 or 501 and approval of Coordinator of Student Field Experience. Mr. Andrews, Mr. Gorrell.

Designed particularly to capitalize upon the results of the experiences of students in full-time participation in schools during September. Open only to students who participated not less than two full weeks in a public school in the September immediately preceding the Quarter of enrollment.

505. Field Service Projects in Education. Two to fifteen credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, permission of the Coordinator of Student Field Experience and definite arrangement for sponsorship and supervision by an instructor. Initial registration may be for as little as two credit hours but in no case may a student accumulate more than twenty-two hours under this course and Education 502, 518, 520, 536, 537, and Nursing 661. Mr. Gorrell.

This course is to provide opportunity for practical field experience in public and private social agencies and in schools. Registrants are placed in responsible positions in the field and required to attend a conference group each week. The field service will be integrated with professional courses in the College of Education in an effort to increase the student's understanding of problems in education and his facility in meeting them effectively.

Both group work and case work are involved in this program. A prospectus of typical projects which student may undertake is obtainable along with the appropriate application form in Room 103 Arps Hall.

† Not given during the academic year, 1956-1957.

Students enrolling for this course may spend one full Quarter off the campus or a part of each school day or week in active service. In each case the activities must be carefully planned by the student and supervised by a teacher of the University staff. The course will include a final written evaluation of the field experiences.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

†682. **Field Laboratory in Conservation Education.** Six to eight credit hours. Prerequisite, a minimum of 110 Quarter hours of which twenty hours must be in Education, including Education 684 or equivalent, or enrollment in the Conservation Curriculum of the College of Agriculture.

This course is designed primarily for teachers in the elementary and secondary schools and is conducted from Camp Muskingum near New Philadelphia, Ohio. It will employ the entire time of the student. Field trips, laboratory demonstrations, group discussions, and lectures concerning the subject-matter, curriculum, and methods of teaching in the fields of conservation of soil, water, plant life, wild life, and other resources, will be conducted.

798. **Field Laboratory Workshop.** Three credit hours. Autumn, Winter, and Spring Quarters. May be taken for not more than three Quarters with a maximum credit of nine hours.† One two-hour workshop meeting each week in addition to individual conferences and supervised experimentation. Conferences, observations, and committee reports. Workshops will be conducted in the schools or school centers for which workshops are authorized. Open to teachers, administrators, and supervisors with senior standing or above, who, in the judgment of the committee on workshops, have an educational background in the subject matter of the workshop which will serve as an adequate base for intensive work in this field. Such persons must have the recommendation of the school system or systems in which the workshop is conducted, as well as that of the college staff member directing the workshop.

Graduate students must demonstrate satisfactory ability to deal critically and constructively with a phase of the total problem approved by the workshop director as appropriate for graduate study, and must submit individual papers covering in detail their contribution to the total workshop problem.

Application for a Field Laboratory Workshop should be made to the Chairman of the Department of Education at least one month prior to the opening of the Quarter in which it is desired to conduct the workshop. Each workshop will be concerned with a problem arising in a local school system in Ohio, the solution of which has educational significance also to other school systems in the state or nation. In the attack on such problems, individual members of the workshop will study and experiment with respect to their special fields as they relate to the total problem. Students registered for the course will be required to submit individual papers covering in detail their contributions to the total workshop problem. Graduate students must demonstrate satisfactory ability to deal critically and constructively with a phase of the total problem approved by the workshop director as appropriate for graduate study. The workshop group will be required to prepare, under the supervision of the workshop director, a written report which includes a statement of the problem attacked, the procedures used, the results obtained, and such other information as may be useful in dealing with a similar problem in other countries.

†799. **Education Workshop.** Eight credit hours for six-week workshops, four credit hours for three-week workshop. Maximum credit twelve hours.† Full time of students required, therefore registrants are not permitted to take other University work concurrently. Open only to experienced teachers, administrators, and supervisors with junior standing or above who, in the judgment of the committee on workshops, have an educational background in the subject matter of the workshop which will serve as an adequate base for intensive work in this field.

Graduate students must demonstrate satisfactory ability to deal critically and constructively with a phase of the total problem approved by the workshop director as appropriate for graduate study and must submit individual papers covering in detail their contribution to the total workshop problem.

Education workshops will be arranged upon application of twenty enrollees, provided appropriate faculty staffing is available.

† Not given during the academic year, 1956-1957.

† Maximum credit allowed for campus and field workshops is twelve hours. Prior to Summer Quarter, 1951, the courses were given under the numbers 625 and 626.

The Education Workshop brings together from a variety of schools persons of similar or closely related specialized interests. In the Workshop they will pool their practical experience and the results of their local experimentation and will systematize and relate this knowledge through intensive study of the literature of the field. The primary purpose will be that of developing sound principles and procedures with respect to professional work in the specific field.

ENGINEERING DRAWING

Office, 218 Brown Hall

PROFESSORS PAFFENBARGER, FIELD, JONES, COOPER, VIERCK, AND SHUPE, ASSOCIATE PROFESSORS MACHOVINA, PHILBY, AND WATKINS, ASSISTANT PROFESSORS KEARNS, REED, PARKINSON, HANG, AND YARRINGTON, MR. DAVIS, MR. SCHUMANN, AND ASSISTANTS

400. Elementary Engineering Drawing. Four credit hours. One Quarter. Autumn, Winter, Spring. One lecture and four two-hour laboratory periods each week. Mr. Philby, Supervisor.

Lettering, use of instruments, applied geometry, projection drawing, size description and pictorial representation.

401. Principles of Engineering Drawing. Four credit hours. One Quarter. Autumn, Winter, Spring. Four two-hour periods of lecture and laboratory each week. Mr. Cooper, Supervisor.

Lettering, use of instruments, applied geometry, orthographic projection, sections, rotation, pictorial drawings, auxiliary and oblique views, sketching.

Not open to students who have credit for Engineering Drawing 400.

402. Principles of Engineering Drawing. Four credit hours. One Quarter. Winter and Spring. One lecture and four two-hour laboratory periods each week. Prerequisite, Engineering Drawing 400 or 401. Mr. Reed.

Lettering, auxiliary, development of surfaces, dimensioning, elementary working drawings, charts and graphs.

403. Principles of Engineering Drawing. Four credit hours. One Quarter. Autumn, Winter, Spring. Four two-hour periods each week for lecture and laboratory. Prerequisite, Engineering Drawing 401. Mr. Shupe, Supervisor.

Orthographic solutions to space problems including intersections, developments and vectors. Charts, graphs, and diagrams.

405. Principles of Engineering Drawing. Four credit hours. One Quarter. Autumn, Winter, Spring. Four two-hour periods each week for lecture and laboratory. Prerequisite, Engineering Drawing 403. Mr. Machovina, Supervisor.

Graphical solutions involving scales, empirical and derived curves; slide rule; dimensioning; threads; fasteners; working drawings including special types; technical sketching.

406. Interior Design and Perspective. Four credit hours. Winter Quarter. One lecture and four two-hour laboratory periods each week. Prerequisite, Engineering Drawing 400 or 401. Mr. Reed.

Elementary development of surfaces. Working drawings of furniture. Orthographic projection and perspective as applied to interiors and furnishings. Elementary architectural drawing.

416. Elements of Drawing and Lettering. Two credit hours. Winter Quarter. Six laboratory hours each week. No prerequisite. Electives for students in Engineering, Arts, Education, Pharmacy. Mr. Philby.

Instruction in single stroke commercial gothic, inclined, display lettering and layout.

421. Engineering Drawing. Three credit hours. One Quarter. Autumn, Winter, Spring. One lecture and three two-hour laboratory periods each week. Prerequisite, Engineering Drawing 405. Mr. Vierck and Mr. Watkins.

Working drawings, technical sketching, dimensioning, limits and tolerances, gears, piping, structural practice, and welding.

538. House Planning. Three credit hours. Spring Quarter. Six laboratory and conference hours each week. Mr. Field.

A study of the underlying principles governing the successful planing of homes. Reading architect's plans and specifications, judging complete buildings, designing and sketching plans.

NOTE: TEACHING COURSES. For the Teaching Courses in this department, see the Department of Education, Courses 696, 697, and 698.

ENGLISH

Office, 115 Derby Hall

PROFESSORS ESTRICH, FULLINGTON, WALLEY, WILSON, DERBY, CHARVAT, SIMPSON, UTLEY, ALTICK, BLOOMFIELD, AND PEARCE, **ASSOCIATE PROFESSORS** SNOW, HUGHEY, LOGAN, ELLIOTT, AND ROBBINS, **ASSISTANT PROFESSORS** DUMBLE, WHITMER, VARANDYAN, HABER, KANE, BLICKLE, TOWNSEND, FURNISS, SHEDD, WHEELER, AND WRIGHT, **INSTRUCTORS, ASSISTANT INSTRUCTORS, AND GRADUATE ASSISTANTS**

NOTE: The minimum requirement and the sequence of courses for students offering English as one of their teaching fields are state on page 56.

REVIEW COURSE IN ENGLISH COMPOSITION

Preceding the first two class sessions in English 416, tests will be given to determine the ability of students to use the English language effectively. Students with less than expected ability will be dropped from the regular classes and assigned to English 400, a review course in English fundamentals for the Quarter. An additional fee will be charged for this review course.

400. Review of the Elements of Composition. Three credit hours. One Quarter. Autumn, Winter, Spring. Three credit hours will be added to graduation requirements. Director, Mr. Robbins.

A review of functional grammar and the elementary principles of written composition, practice in writing.

This course is designed for students who are not adequately prepared to undertake the work of English 416. Students may be assigned to the course because of unsatisfactory performance in the placement test or because of inability to maintain a satisfactory standard in English 416. This course may not be taken concurrently with English 416. An additional fee will be charged for this review course. (English 400.)

406. English for Foreign Students. No credit hours or five credit hours for undergraduates who make satisfactory progress in the course. One Quarter. Autumn, Winter, Spring. This course may be repeated with the permission of the instructor. Course credit may not be counted toward graduation. Speech 405 must be taken concurrently.

A course in the essentials of English for foreign students. Grammar, idiom, vocabulary, pronunciation; oral and written exercises.

416. Composition and Reading. Three credit hours. One Quarter. Autumn, Winter, Spring. Director, Mr. Robbins.

Guided training in expository writing with an emphasis on fundamentals of paragraphing, sentence structure, and mechanics, as illustrated in the student's own writing and in the essays of professional writers.

Not open to students who have credit for English 401, 402, 403, 410, 411, 412, 413, 414, 430, 505, 506, 507, 508.

417. Composition and Reading. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, English 416 or 410. Director, Mr. Robbins.

Guided training in expository writing with continued emphasis on fundamentals, approached specifically through a study of the techniques of critical reading.

Not open to students who have credit for English 401, 402, 403, 411, 412, 413, 414, 430, 505, 506, 507, 508.

418. Composition and Reading. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, English 417 or 411. Director, Mr. Robbins.

Guided training in expository writing: a continuation of English 416 and 417, approached specifically through the study of imaginative literature.

Not open to students who have credit for English 401, 402, 403, 412, 414, 430, 505, 506, 507, 508.

PREREQUISITE FOR 500 COURSES

Unless otherwise indicated, the prerequisites for 500 courses are English 401 and 480, or 416-417-418, or 410-411-412.

501. Readings in Recent Drama. Three credit hours. One Quarter. Autumn and Spring. Mr. Dumble.

Wide reading in American and European plays since 1920. Lecture and discussion.

Not open to students who have credit for English 670. Not accepted for credit on the English major.

502. Readings in Recent Prose Fiction. Three credit hours. Winter Quarter. Mr. Dumble.

Wide reading with particular attention to the novel. Lecture and discussion.

Not accepted for credit on the English major.

505. Informative Writing. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, junior standing and English 401 and 430, 412, or 418, or the equivalent. Director, Mr. Robbins.

Guided training in the craft of effective and mature informational writing.

Required in the junior year of students in the Bachelor of Arts curriculum.

Recommended for students in the Bachelor of Science curriculum.

506. Critical Writing. Five credit hours. Spring Quarter. Prerequisite, permission of the instructor. Miss Whitmer.

Introduction to critical theory and guided practice in literary criticism. Particular emphasis upon the relation of critical analysis to the student's own writing. Recommended to students interested in creative writing as well as in the study of literature.

507. Narrative Writing. Five credit hours. One Quarter. Autumn and Winter. Prerequisite, permission of the instructor. Mr. Varandyan, Miss Whitmer.

Guided practice in the writing of short fiction.

510. Introduction to American Literature. I. Three credit hours. One Quarter. Autumn, Winter, Spring. Miss Whitmer, Mr. Zanger, Mr. Pearce, Mr. Hovde.

A critical survey of major writers and movements from the beginning to about 1870, with emphasis upon Poe, Emerson, Hawthorne, Melville, Thoreau, and Whitman.

Not open to students who have credit for English 609, 610.

511. Introduction to American Literature II. Three credit hours. One Quarter. Winter and Spring. Three recitations each week. Elective. Prerequisite, English 510. Mr. Charvat, Mr. Pearce, Mr. Hovde, Mr. Zanger.

A critical survey of major writers and movements from about 1870 to the present, with emphasis upon Twain, James, and leading twentieth century writers.

Not open to students who have credit for English 609, 610.

This course partially fulfills the B.A. and B.Sc. requirements in literature.

520. The Reading of Poetry. Three credit hours. One Quarter. Winter and Spring. Mr. Wheeler, Mr. Babb.

A course designed to teach students who have had little experience with poetry how to read a poem, and to teach those who have had more experience how to read a poem better.

521. Introduction to Fiction. Three credit hours. One Quarter. Autumn and Spring. Mr. Wright, Mr. Babb.

An intensive study of a limited number of short stories and novels, designed to acquaint the general student with some of the most important themes and techniques of fiction.

529. The English Bible. Five credit hours. Winter Quarter. Mr. Fullington.

A study of the King James version of the Bible as a masterpiece of world literature and an English classic. A brief survey of the English translations, their place and influence in English literature; a careful consideration of the narrative, prophetic, and poetic books of the Old and New Testaments viewed as literature.

540. Masters of Modern Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Mr. Derby, Mr. Snow, Mr. Varandyan, Miss Diamond.

An introduction to modern poetry, drama, and fiction through the study of five or six of the following authors as artists and thinkers: Shaw, O'Neill, MacLeish, Frost, Galsworthy, Conrad, Mann, T. E. Elliot, E. A. Robinson, Yeats, Porter, Hemingway.

550. Introduction to Shakespeare. Five credit hours. One Quarter. Autumn, Winter, Spring. Mr. Wilson, Mr. Furniss, Mr. Bloomfield, Mr. Townsend, Mr. Hazelton, Mr. Howard.

An intensive study of selected plays of Shakespeare, designed to give an understanding of drama as theatrical art and as an interpretation of fundamental human experience.

Not open to students who have credit for English 555.

This course partially fulfills the B.A. and B.Sc. requirement in literature.

555. Introduction to Drama. Five credit hours. Spring Quarter. Mr. Walley.

A critical analysis of selected dramatic masterpieces from Greek antiquity to the present, designed to clarify the nature of dramatic art and its major achievements in the theater of western Europe and America.

Not open to students who have credit for English 550.

563. Masterpieces of English Literature. Three credit hours. One Quarter. Autumn, Winter, Spring. Miss Hughey, Mr. Haber, Mr. Maurer, Mr. Derby.

A course designed to lead the student to an appreciative understanding of some of the great poetry and prose written before 1675. Selections will be taken from three or four of the following: *Beowulf*, Chaucer's *Canterbury Tales*, Spencer's *Faerie Queene*, the King James version of the Bible, Milton's *Paradise Lost*, Elizabethan and Jacobean lyrics.

Not open to students who have credit for English 560 or 562.

564. Masterpieces of English Literature. Three credit hours. One Quarter. Autumn, Winter, Spring. Miss Hughey, Mr. Derby, Mr. Ferguson.

A continuation of 563, but may be taken separately.

Selections for reading and class discussion will be drawn from the works of four or five of the following writers: Swift, Pope, the Romantic poets, Carlyle, Tennyson, Browning, Arnold. More cursory reading may be done in the novel of the period.

Not open to students who have credit for English 560 or 562.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Unless otherwise indicated, the prerequisites for "600" courses are ten hours in literature, history, history of fine arts, history or appreciation of music, anthropology or philosophy.

609. The American Renaissance in Literature. Five credit hours. Autumn Quarter. Miss Whitmer.

An introduction to the major American writers of the mid-nineteenth century: Poe, Hawthorne, Melville, Emerson, Thoreau, Whitman. The readings in this course do not duplicate these in English 510-511.

610. American Fiction from Twain to Dreiser. Five credit hours. Winter Quarter. Mr. Simpson.

Studies in fiction from the Civil War to the First World War, with emphasis on Twain, Howells, James, the regionalists, the early naturalists, and Dreiser. The readings in this course do not duplicate those in English 510-511.

615. Twentieth Century American Writers. Five credit hours. Spring Quarter. Miss Whitmer.

A study of the development of American literature after 1914 with emphasis on the major poets and novelists.

620. Folklore. Five credit hours. Spring Quarter. Mr. Simpson.

A critical examination of some of the outstanding English and American folk songs and international folk tales. Lectures and class discussions will be supplemented by recordings.

625. Standards of English Usage. Five credit hours. Autumn Quarter. Prerequisite, the general prerequisite for "600" courses as listed above, or Journalism 505 or 602. Mr. Bloomfield.

This course examines standards of English grammar and pronunciations, the structure and vocabulary of English, and the idea of correctness in language. The approach throughout is functional rather than historical, to meet the needs of students interested in writing, teaching, the development of their own culture or the investigation of language generally.

627. The Language We Speak. Five credit hours. Winter Quarter. Given in alternate years. Prerequisite, the general prerequisite for "600" courses as listed above, or Journalism 505 or 602. Mr. Newmark.

A study of the history of English, its words and structure and logic, its cultural patterns and philosophical significance, and its use as an instrument of communication.

635. The Age of Wit and Satire. Five credit hours. Autumn Quarter. Mr. Wilson.

The skeptical and critical mind of the Early Enlightenment as reflected in lyric and satiric verse from Dryden to Pope; the comic wit of the Restoration, and the bitter wit of Swift.

636. Literature of the Eighteenth Century. Five credit hours. Winter Quarter. Mr. Kuhn.

The controlling ideas of the Age of Reason as they are reflected in the major literature. Intensive reading in the works of Swift, Pope, Fielding, Sterne, Boswell, Johnson, and Blake.

641. The Romantic Temper. Five credit hours. One Quarter. Autumn and Spring. Mr. Derby, Mr. Townsend.

The influence of the French Revolution and the pre-eminence of romanticism as seen in such major poets as Wordsworth, Coleridge, Byron, Shelley, and Keats, and a limited selection of the poems of the period.

642. The Victorian Age. Five credit hours. One Quarter. Winter and Spring. Mr. Altick, Mr. Townsend.

The spirit and temper of the Victorian period as seen in the work of such poets as Tennyson, Browning and Arnold, and in representative essays of the great social critics.

643. The Writing Laboratory. Five credit hours. Spring Quarter. Three group meetings each week and individual conferences. Prerequisite, permission of the instructor. Mr. Snow.

Directed writing in the shorter forms of fiction, in the essay, or in criticism, depending on the direction of the individual students' talent. Conferences and group discussions will provide guidance in the problems of writing. Six modern books will be read and discussed as examples of writing practice.

648. Playwriting. Five credit hours. Autumn Quarter. Five recitations each week. Elective. Prerequisite or concurrent, one of the following courses: English 676, 677, or 670. Given in alternate years. Mr. Shedd.

Elementary laboratory course in playwriting. Methods of play analysis with attention to dramatic technique. An historical consideration of the major forms of drama.

653. Chaucer. Five credit hours. Autumn Quarter. Mr. Utley.

A close study of Chaucer's principal works and of the poet's development as an artist in relation to his social and literary background.

Not open to students who have credit for English 753.

654. Introduction to Medieval Literature. Five credit hours. Winter Quarter. Mr. Estrich.

The study of significant literary masterpieces from the Middle Ages, chosen for their value in interpreting aspects of medieval culture as well as for their independent literary worth.

656. The Nineteenth Century English Novel. Five credit hours. Spring Quarter. Mr. Logan.

Readings in a group of major novelists, such as Austen, Dickens, Thackeray, and others, with emphasis upon social and humanistic values.

670. Modern Drama. Five credit hours. Spring Quarter. Mr. Shedd.

An historical and critical examination of the major developments, personalities, and achievements in the drama of Europe and America since the advent of Ibsen.

671. Early Seventeenth Century Literature. Five credit hours. Spring Quarter. Mr. Robbins.

A study of non-dramatic literature in England from 1600 to 1660, with chief emphasis on the work of Bacon, Jonson, Donne, Browne, and Milton, viewed against their literary, social and historical background.

674. The English Renaissance. Five credit hours. Autumn Quarter. Miss Hughey.

A study of Tudor prose and poetry as they reflect the creative and inquiring temper of an age stimulated by such cultural forces as humanism, the Reformation, great natural and technological discoveries, and increasing national self-consciousness.

676. Shakespeare. Five credit hours. Winter Quarter. Mr. Walley.

A critical consideration of the art, personality, and achievement of Shakespeare in the light of Renaissance culture and modern significance.

677. English Drama: Medieval and Renaissance. Five credit hours. Autumn Quarter. Prerequisite, English 550 or 555 or the equivalent. Mr. Walley.

An historical and critical examination of the English popular drama from its origin to the closing of the theatres in 1642, with special emphasis upon the evolution of dramatic concepts and theatrical art.

678. English Drama: Restoration and Eighteenth Century. Five credit hours. Winter Quarter. Prerequisite, English 550 or 555 or the equivalent. Mr. Wilson.

An historical and critical study of English drama from 1660 to 1800, with chief emphasis upon Restoration heroic drama and comedy of wit, eighteenth-century sentimental drama and the comedy of Sheridan and Goldsmith.

701. Minor Problems in English. One to five credit hours. All Quarters. Prerequisite, senior standing and permission of the Department Graduate Committee.

Students may register for individual directed study under this number by arrangement with the appropriate member of the staff and the Department Graduate Committee.

705-706-707. Honors Courses. Three to ten credit hours. Autumn, Winter, and Spring Quarters. A program of reading arranged for each student, with individual conferences and reports. Prerequisite: (1) senior standing; (2) the record of "A" in at least half of his English courses and an average of "B" in the remainder; (3) the permission of the professor under whose supervision the work is desired. The usual credit in this course is three hours, and more will be allowed only to candidates for distinction in English who have in their junior year passed with high grades a program approved by the Committee on Honors. Director, Mr. Snow.

Not open for graduate credit.

PREREQUISITES FOR "700" COURSES

Except for English 705-706-707 all "700" courses are designed primarily for graduate students. They are open also to seniors who have credit for ten hours of literature courses on the "600" level, but only upon permission of the Department Graduate Committee.

708. Studies in the American Renaissance. Five credit hours. Spring Quarter. Mr. Charvart.

An intensive study of several major literary figures of the mid-nineteenth century in relation to the American environment and foreign influences. This course assumes that the student has an acquaintance with the basic writings of the period as developed in English 609.

709. Studies in American Fiction, 1865-1914. Five credit hours. Autumn Quarter. Mr. Simpson.

An intensive study of important fiction from Twain to Dreiser. The course assumes that the student has an acquaintance with the basic fiction of the period as developed in English 610.

710. Literature and the Methods of Intellectual History. Five credit hours. Winter Quarter. Mr. Pearce.

A study of the principal methods of intellectual history as they bear upon literary history and criticism.

Not open to students who have credit for English 601.

727. Twentieth Century Poetry. Five credit hours. Spring Quarter. Mr. Pearce.

A critical study of a representative body of modern poetry, with emphasis on selected major writers.

728. Twentieth Century Fiction. Five credit hours. Autumn Quarter. Acquaintance with French 640 and German 616 is recommended. Mr. Simpson.

A study of the chief tendencies in modern fiction as seen in the work of such major figures as Proust, Joyce, Mann, D. H. Lawrence, Virginia Woolf, Hemingway, and Faulkner.

735. Dryden. Five credit hours. Winter Quarter. Mr. Wilson.

A detailed study of the poems, plays, and essays of John Dryden, as exemplifying the principles and practices of the early Enlightenment.

***736. Pope.** Five credit hours. Winter Quarter. Given in alternate years, Mr. Elliott.

Intensive reading and investigation of Pope's work with emphasis on its specifically literary value, and in its relation to the intellectual climate of the age.

737. Swift. Five credit hours. Spring Quarter. Given in alternate years. Mr. Ferguson.

An intensive critical study of Swift's work and of its relation to the intellectual and political movements of the Age of Reason.

738. Studies in the Eighteenth Century. Five credit hours. Autumn Quarter. Mr. Wright.

An intensive examination of an important aspect of eighteenth century literature or thought. The topic will vary from year to year.

The topic for 1956-1957. The Eighteenth Century Novel.

742. Browning. Five credit hours. Spring Quarter. Mr. Altick.

An intensive study of most of Browning's significant poems, with primary emphasis upon the poet as a literary artist, but also considering in some detail his place in the history of Victorian thought, the nature of his popular appeal, and his influence upon later literature.

744. Arnold. Five credit hours. Autumn Quarter. Given in alternate years. Mr. Derby.

Wide reading in the poetry and prose of Matthew Arnold, with a study of his background and his relation to both his own time and the Twentieth Century.

745. Wordsworth. Five credit hours. Winter Quarter. Mr. Logan.

The social and political thought of Wordsworth's day, his position as the pivotal figure in the Romantic Movement, his philosophy of Man and Nature, and his place in literature as poet and thinker.

746. Middle English Literature. Five credit hours. Spring Quarter. Given in alternate years. Mr. Bloomfield.

A critical reading of the chief monuments of Middle English literature, exclusive of Chaucer. Cultural backgrounds will be supplied from related works in English and other languages, usually in translation. The language will be taught inductively and only as necessary to the reading of the texts.

751. Old English Poetry. Five credit hours. Winter Quarter. Given in alternate years. Mr. Bloomfield.

A critical reading of the Old English poetry with attention to problems of structure and texture. Cultural backgrounds will be supplied from contemporary prose, sometimes in translation. The language will be taught only as necessary to the reading of texts.

***755-756. Linguistics and English.** Five credit hours each Quarter. Autumn and Winter Quarters. Given in alternate years. Mr. Utley.

An introduction to the characteristic problems and tools of linguistic science with reference to their use in the study and teaching of English language and literature. Topics to be studied are general linguistics, language and culture, phonetics and dialect geography, the history of English, problems in the teaching of English literature and language.

771. Donne and Other Metaphysics Poets. Five credit hours. Autumn Quarter. Given in alternate years. Mr. Wilson.

* Not given in 1956-1957.

A close study of significant verse of the early Seventeenth Century, designed for graduate students and for undergraduates with a special interest in poetry.

*772. Studies in Renaissance Prose. Five credit hours. Spring Quarter. Given in alternate years. Miss Hughey.

The evolution of literary prose from More to Milton as seen in representative works which are related critically in rhetorical theory and significant cultural forces. Emphasis is upon writers of the earlier seventeenth century

*773. Spenser. Five credit hours. Autumn Quarter. Given in alternate years. Miss Hughey.

A study of Spenser's poetry, its literary significance, and its relation to foreign, classical, and native English poetic traditions.

775. Milton. Five credit hours. Winter Quarter. Given in alternate years. Mr. Robbins.

Reading in the poetry and prose of John Milton, with relation to his social and literary background.

NOTE: TEACHING COURSES. For the Teaching Courses in this department see the Department of Education, Courses 670 and 671.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENTOMOLOGY

(See Zoology and Entomology)

EUROPEAN HISTORY

(See History)

FINE AND APPLIED ARTS

Office, 104 Hayes Hall

PROFESSORS SEVERINO, SEIBERLING, HOPKINS (EMERITUS), FANNING, FREY, GATRELL, SHERMAN, GRIMES, LITTLEFIELD, ATHERTON, BOGATAY, AND BARKAN, ASSOCIATE PROFESSORS WOOD, CHADEAYNE, KING, AND RANNELLS, ASSISTANT PROFESSORS CHAFETZ, COLLINS, CSURI, FETZER, FRILEY, M. T. GATRELL, HAUSMAN, KAPLAN, KRUMM, AND FREEMAN, MRS. MITCHELL, MR. FISTICK, MR. BLACK, MR. HALL, MISS STITES, MR. THOMPSON, MR. WYNNE, MR. LUDDEN, MR. CARNEY, MR. GOODWIN, MISS HALEY, MR. HANNAH, MR. HEWETT, MR. PATTON, MR. STEVENS, AND MISS BRUNNER

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* Not given in 1956-1957.

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COURSES FOR NON-FINE ARTS MAJORS

The School of Fine and Applied Arts offers a number of service courses for students who are not majoring in art. When majors from a given area enroll in sufficient number in such courses to make up a class section, the course can be correlated more specifically with the students' major interests.

Several of the courses listed below, such as the Art Appreciation courses, which have a very general application, are open both to art majors and to non-art majors. In general, non-art majors must take all prerequisites for any advanced courses in art. Fine Arts 401 may be substituted for Fine Arts 421 by non-art majors and by majors in art within the College of Arts and Sciences. Upon submission of evidence of substantial background and with the approval of the instructor and the coordinating adviser, non-art majors may take more advanced courses without completing the full prerequisites.

401	3 hrs.	Introduction to Fine Art Activities. See below under Drawing.
402	3	Freehand Drawing. See below under Drawing.
404	3	Advanced Freehand Drawing. See below under Drawing.
405	3	Advanced Freehand Drawing. See below under Drawing.
407	3	Water Color Painting. See below under Painting.
408	3	Water Color Painting. See below under Painting.
411	3	Drawing from Life. See below under Drawing.
412	3	Drawing from Life. See below under Drawing.
421	5	Basic Art—Drawing and Fine Arts Orientation. See below under Basic Art.
430	5	Fundamentals of Art. See below under Design.
431	5	Elementary Design. See below under Basic Art.
437	3	Costume Design. See below under Design.
484	3	An Introduction to Ceramic Art. See below under Ceramic Art.
485	5	Ceramic Laboratory. See below under Ceramic Art.
494	3	Introduction to Art. See below under Basic Art.
495	3	The Development of Modern Art. See below under Basic Art.
496	3	Contemporary Art. See below under Basic Art.
501	3	History of the Fine Arts through the Ages. See below under Art History.
502	3	History of the Fine Arts through the Ages. See below under Art History.
503	3	History of the Fine Arts through the Ages. See below under Art History.
532	5	History of Costume Design. See below under Art History.
561	5	Sculpture. See below under Sculpture.
563	2	Primitive Art. See below under Art History.
566	5	History of Oriental Art. See below under Art History.

BASIC ART

421. Basic Art—Drawing and Fine Arts Orientation. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods plus one hour of orientation for classes given Autumn Quarter. Staff.

Participation in laboratory experience in drawing with emphasis on the correlation of

drawing and design in form, value and color. Concurrently, through lectures, discussions and field trips, survey is made of the field of Fine Arts specializations. The student is stimulated through individual guidance to find his areas of special interest.

Not open for credit to students who have credit for Fine Arts 401, 402, or 403.

423. Basic Art—Drawing. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods each week. Prerequisite, Fine Arts 421 or 401 and 402. Staff.

A concentrated experience in the use of the various drawing media with continuation of the underlying principles as utilized in Fine Arts 421. Laboratory and field problems.

Not open to students who have credit for Fine Arts 404-405.

431. Basic Art—Elementary Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods each week. Prerequisite, Fine Arts 421 or Fine Arts 401. Staff.

An introductory course in design to formulate and implement the principles governing the visual organization of form, shape, and color. The experiences in drawing are related to the problems of designing with tri-dimensional materials.

432. Basic Art—Intermediate Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week. Prerequisite, Fine Arts 430 or 421. Staff.

Special problems in design with emphasis on the character of materials and their application to practical problems.

494. Introduction to Art. Three credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour periods each week. Art History Staff.

This is a course in art appreciation. Differing approaches to the visual organization basic to all art will be clarified with particular stress on seeing, understanding, and enjoying modern art and architecture.

495. The Development of Modern Art. Three credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour periods each week. Art History Staff.

From the changes in art accompanying the French Revolution through Post Impressionism and Functionalism in architecture.

496. Contemporary Art. Three credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour periods each week. Prerequisite, Fine Arts 495. Art History Staff.

From early 20th century experiments in abstraction and expression to the art and architecture of the present.

500. Basic Art—Painting. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Fine Arts 423 and 431. Staff.

A course in painting which emphasizes the use of color, drawing and design in the development of a personal idiom of expression. Opaque media. Laboratory and field problems.

Not open to students who have credit for Fine Arts 427.

505. Basic Art—Life Drawing. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week, with weekly problems. Prerequisite, Fine Arts 500 and 561. Mr. Chadeayne, Mr. Gatrell, Mr. King.

Experience in drawing from the human figure. Work in a variety of media. Discussion of the problem of drawing as related to important historical styles. Laboratory problems and field trips.

561. Basic Art—Sculpture. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour laboratory periods each week, with weekly problems. Prerequisite, Fine Arts 421. Mr. Frey, Mr. Johnson, Mr. Thompson.

Experience in the principles of form organization through the use of the sculptor's materials. Work from the model and weekly composition projects.

Not open to students who have credit for Fine Arts 461.

ART APPRECIATION

494, 495, 496. See under Basic Art.

ART EDUCATION

459. Orientation to Art Education. Three credit hours. Winter Quarter. Three hours each week. Prerequisite, Fine Arts 457, 458, and 460 or Education Survey 501. Mrs. Mitchell.

An introduction to the nature of the Art Education Program in the contemporary school with emphasis on the professional character of the teacher's social responsibility. Discussion, reading, field trips.

460. Orientation to Art Education. Two credit hours. Spring Quarter. Two one-hour class periods each week. Mrs. Mitchell.

Two weekly lectures and discussions pointed toward a relation of the student's experience in the Basic Art program to his professional interests.

Not open to students who have credit for Fine Arts 457 and 458.

548. Art Education Laboratory. Four credit hours. Autumn Quarter. Four two-hour laboratory periods each week. Prerequisite, Fine Arts 432 and 459.

Laboratory problems related to the principles of the nature of child development.

549. Art Education Laboratory. Two credit hours. Winter Quarter. Two two-hour laboratory periods each week. Prerequisite, Fine Arts 548.

Further development of experience in Fine Arts 548 with particular emphasis upon the integration of experience in a school program.

569. Art for Elementary Teachers. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods each week.

The development of sensitivity to the visual arts as a basis for the understanding of children's art. Creative experience with paints, chalk, clay, and handicraft materials together with related cultural background. Laboratory, lecture, discussion and reading.

570. Art for Elementary Teachers. Three credit hours. One Quarter. Autumn, Winter, Spring. Three two-hour laboratory periods each week. Prerequisite, Fine Arts 569. Mrs. Mitchell.

Workshop for creative thinking with related art materials. Synthesis of the teacher's experience in visual perception and concepts of the nature of child development. Individual interest groups as established by age level interest, choice of background material, etc. Evaluation of the teacher's experiences in the light of continuous developmental growth of children. Laboratory, lecture, discussion and reading.

600. The Theory of Art Education. Five credit hours. Autumn Quarter. Five three-hour periods each week. Prerequisite, Fine Arts 549, and Education 533 and 514. Mr. Barkan.

Planning and organizing the art education program in the school. The practical problems and the theoretical possibilities. The resolution of the students' experience toward his responsibility in the field of Art Education.

†799. Art Workshop for Elementary Teachers. Four credit hours. Full time of student for last three weeks of first term. Prerequisite, three years of work in professional education curriculum.

An intensive study of the creative art experience of children in relation to classroom procedure and practice. Planning and organizing the art program in the elementary school. Laboratory experimentation with art materials in the solution of advanced problems, group discussion, etc.

Not open to students who have credit for Fine Arts 620.

NOTE: For courses in Supervised Teaching in Art see Education 520C and Education 536C.

ART HISTORY

501-502-503. History of the Fine Arts Through the Ages. Three credit hours. Each course to be offered Autumn, Winter, Spring. Not open to Freshmen. Mr. Fanning.

The history of architecture, sculpture, painting, and the minor arts which best reflect civili-

† Not given during the academic year, 1956-1957.

ization from the time of the earliest artistic expression in Egypt and Mesopotamia to the close of nineteenth century developments in Europe and America. A survey with consideration of physical and spiritual factors determining the trend of art. Illustrated lectures, quizzes, and reports.

532. History of Costume Design. Five credit hours. Winter Quarter. Five two-hour periods each week with outside problems.

A study of the development of costume from the standpoint of design with its social and historical background and its connection with the prevailing interior decoration of each period.

***563. Primitive Art.** Two credit hours. Autumn Quarter. Prerequisite, Fine Arts 494. Prerequisite or concurrent, Sociology 501.

A study of primitive art and its psychology with correlations in the modern field of painting and sculpture.

***626. The Art of India and Indonesia.** Five credit hours. Autumn Quarter. Five lectures each week. Prerequisite, Fine Arts 494, 495, 496, or Fine Arts 501, 502, 503 or equivalent study in cognate fields by permission of the instructor. Mr. Kaplan.

A cultural art history surveying the achievements of India in terms of monuments and philosophies with emphasis on the effect of religious concepts of art from about 3,000 B.C. until the advent of Islam.

To be offered in 1957-1958.

627. The Art of China. Five credit hours. Autumn Quarter. Five lectures each week. Prerequisite, Fine Arts 494, 495, 496, or Fine Arts 501, 502, 503 or equivalent study in cognate fields by permission of the instructor. Mr. Kaplan.

A cultural art history surveying the achievements of China in terms of monuments and ideas. Reference is made to the viewpoints of archaeology, literature, aesthetics, and philosophy.

Not offered in 1957-1958.

628. The Art of Japan. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Fine Arts 494, 495, 496 or Fine Arts 501, 502, 503 or equivalent study in cognate fields by permission of the instructor. Mr. Kaplan.

A cultural art history surveying the achievements of Japan in terms of monuments and beliefs. The reflection in the art of Animism, Shinto, Buddhism, and Zen—together with decorative and popular contributions—will also be considered.

Not offered in 1957-1958.

629. Problems in Contemporary Art. Five credit hours. Spring Quarter. Prerequisite, Fine Arts 494, 495, 496. Mr. Ludden.

New concepts in the arts of contemporary Europe and America through the study of selected problems such as Picasso and Cubism, and the Bauhaus and Industrial Design.

***654. History of Renaissance Art in Italy.** Five credit hours. Autumn Quarter. Five lectures each week. Prerequisite, Fine Arts 503. Mr. Fanning.

The study of the Renaissance movement in Italy as reflected in architecture, painting, and sculpture; its influence upon other countries and its relationship to the intellectual trend from the Fifteenth to the Nineteenth Century.

***656. History of Oriental Art.** Five credit hours. Autumn Quarter. Five lectures each week.

The study of Asiatic culture expressed by the historical development of architecture, sculpture and painting in Persia, India, China, and Japan. Illustrated lectures, readings, and reports.

***670. History of the Art of Ancient Egypt, Mesopotamia, and Iran.** Two credit hours. Autumn Quarter. Prerequisite, Fine Arts 501-502-503, or equivalent. Mr. Fanning.

The specialized study of the ancient arts of the valleys of Nile and Tigris-Euphrates and their influence upon eastern Mediterranean culture including Ancient Persia. Lectures, discussions, and presentation by each student of some special problem of research.

***671. History of Hellenic Art.** Three credit hours. Autumn Quarter. Prerequisite, Fine Arts 501-502-503, or the equivalent. Mr. Fanning.

* Not given in 1956-1957.

A specialized study of Greek architecture, sculpture, and painting. Lectures, round table discussions, and presentation by each student of some special problems of research.

***672. History of Islamic Art.** Two credit hours. Winter Quarter. Prerequisite, Fine Arts 501-502-503, or the equivalent. Mr. Fanning.

The study of Moslem architecture and minor arts with special attention to origins and influences. Lectures, reading, and reports.

***673. History of Christian Art of the Middle Ages.** Three credit hours. Winter Quarter. Prerequisite, Fine Arts 501-502-503, or the equivalent. Mr. Fanning.

The specialized study of various phases of Romanesque and Gothic art as an expression of medieval Christianity in Italy, France, Germany, Spain, and England. Lectures, reading, discussions, and reports on research topics.

***674. History of Spanish Art.** Two credit hours. Winter Quarter. Alternating with Fine Arts 672. Prerequisite, Fine Arts 501-502-503, or consent of adviser. Mr. Fanning.

The study of the architecture, sculpture, painting, and minor arts of Spain and the countries under Spanish influence. Lectures and reports.

***675. History of Latin-American Art.** Five credit hours. Spring Quarter. Prerequisite, Fine Arts 501-502-503, or the equivalent in related subjects. Mr. Seiberling.

History of the architecture, sculpture, painting and related arts of Mexico, and the Central and South American countries, from Pre-Columbian times to the present. The successive Mayan, Toltec, Incan, Aztec and transported European civilizations will be considered in the relation to the environmental, religious, political and economic factors that influenced them.

***681. History of British Art.** Two credit hours. Autumn Quarter. Prerequisite, Fine Arts 501-502-503, or recommendation of the Department of English. Mr. Fanning.

A study of the work of outstanding architects, painters and sculptures in Great Britain as an index of the artistic trend since the beginning of the Sixteenth Century. Illustrated lectures, reading and reports.

682. History of American Art. Five credit hours. Winter Quarter. Prerequisite, Fine Arts 501-502-503, or recommendation of the Department of English. Mr. Seiberling.

A study of architecture, painting and sculpture in America during the Eighteenth, Nineteenth, and Twentieth Centuries. Illustrated lectures, reading and reports.

***683. Roman and Early Christian Art.** Three credit hours. Autumn Quarter. Prerequisite, Fine Arts 494, 495, 496 or the equivalent. Mr. Fanning.

A survey of Roman art and the fusion of Byzantine and Roman influences in Christian art before the Middle Ages.

684. The Art of Northern Renaissance. Five credit hours. Autumn Quarter. Prerequisite, Fine Arts 496 or equivalent. Graduate students in art history must give satisfactory evidence that they have completed nine Quarter hours of methodology in art history and nine Quarter hours in the study of historic periods, or their equivalent.

The art of France, Germany, the Netherlands and England from the waning of the Middle Ages through the Renaissance.

***685. Museum Problems.** Three credit hours. Autumn Quarter. Lectures, discussion and practice in problems of the Art Museum, for graduates and advanced undergraduates. Prerequisite, Fine Arts 503 or equivalent.

A course in the functions of a museum, educational and technical; the selection and preservation of art works, their display, and the organization of exhibits; and the museum's relationship to its community and schools.

***686. History of Baroque Art.** Five credit hours. Winter Quarter. Prerequisite, Fine Arts 494, 495, 496 or the equivalent. Graduate students in art

* Not given in 1956-1957.

history must give satisfactory evidence that they have completed nine Quarter hours of methodology in art history and nine Quarter hours in the study of historic periods, or their equivalents.

The evolution of art from the end of the Renaissance to the Industrial Revolution with its correlation in the culture of the time.

CERAMIC ART

484. An Introduction to Ceramic Art. Three credit hours. One Quarter. Autumn (Fine Arts Majors only), Winter, Spring. No prerequisites. This course may be repeated to a total of nine hours. Mr. Bogatay, Mr. Friley.

An introduction to pottery making. Short lectures on materials, forming and decorative processes, glazing and firing. Laboratory practice in building pottery by hand and in the use of the potter's wheel.

485. Ceramic Laboratory. Five credit hours. One Quarter. Autumn, Winter and Spring Quarters. One lecture and four three-hour laboratory periods each week. Mr. Bogatay.

Laboratory practice in building pottery by hand and in the use of the potter's wheel. Mould making and its relation to design.

*487. Ceramic Computations. Three credit hours. Prerequisite, Fine Arts 484, 485, 490 or permission of the school.

The artist's use of ceramic mixtures and their calculation. The possibilities and limitations of color as a design medium.

490-491-492. Elementary Ceramic Art. Five credit hours. Autumn, Winter, and Spring Quarters. Two hours of lecture and six hours of laboratory each week. Mrs. Fetzer.

An introduction to the art phases of the ceramic field. The following topics are considered: materials and their functions in relation to art values; processes and their application; mould making in its relation to design; decorative processes in relation to glazing and firing; art qualities in the design of ceramic products; esthetic qualities in their relation to consumer demand; laboratory practice.

587. Advanced Ceramic Laboratory. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Fine Arts 484, 490 or 485. Mr. Bogatay.

590-591-592.—Ceramic History and Decorative Processes. Five credit hours. Autumn, Winter, and Spring Quarters. Two lectures and nine laboratory hours each week. Mr. Atherton.

A survey in the historical classification of Ceramic Art, emphasizing impulses and influences with a comparative study of results achieved and means of achievement. Laboratory practice in designing ceramic wares using historical and modern methods of decoration. Special consideration is given to the limitations imposed by the media.

593-594-595. Ceramic Composition. Five credit hours. Autumn, Winter, and Spring Quarters. Two lectures and nine laboratory hours each week. Prerequisite, freshman chemistry. Mr. Littlefield.

Practical applications in the use of ceramic mixtures. Laboratory practice in realizing designs through ceramic materials. The possibilities and limitations of color.

COMMERCIAL ART

554-555-556. Commercial Design. Five credit hours. Autumn, Winter, and Spring Quarters. Five three-hour periods each week. Prerequisite, Fine Arts 505 and 558. Mr. Rannells.

A general course serving as an introduction to the various phases of commercial art; engraving processes and drawing for reproduction in various mediums.

Not open to students who have credit for Fine Arts 651, 652, or 653.

558. Commercial Lettering. Five credit hours. One Quarter. Autumn, Winter and Spring. Five three-hour periods each week, with weekly problems. Prerequisite, Fine Arts 421. Mr. Freeman.

The principles of lettering and its application to commercial design.

* Not given in 1956-1957.

635-636-637. Illustrative Drawing. Five credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, Fine Arts 505 and 527 or 528. Mr. Rannells.

Practice in illustrative drawing with study of technique of pen and ink, pencil, wash, and other mediums. Problems in pictorial composition.

Not open for graduate credit.

DESIGN

430. Fundamentals of Art. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and three two-hour laboratory periods each week. Not open to majors in Fine Arts. Miss Boardman.

A general course in the creative use of art materials, with lectures on fundamental art principles in relation to the home, advertising, commercial products and other phases of contemporary life.

431. Elementary Design. See under Basic Art.

432. Intermediate Design. See under Basic Art.

437. Costume Design. Three credit hours. One Quarter. Autumn, Winter, Spring. Three two-hour laboratory periods each week. Prerequisite, Fine Arts 430 or 431.

Problems utilizing the basic principles of form, shape and color as applied to dress design. The development of personal capacities for dress selection. Reports, lectures, and demonstrations by guest speakers.

507. Product Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour laboratory periods to be arranged each week. Prerequisite, Fine Arts 432 and 534. Mr. Wood.

Application of art principles to products made in industry. Research design problems in various categories, i.e., household appliances, lighting fixtures, furniture, machinery, etc., will be assigned. Experiments on the industrial use of color will be made. Models will be constructed in the laboratory. Written reports and readings will supplement visits to manufacturing concerns.

534. Design Materials. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour periods each week. Prerequisite, Fine Arts 430 or 431. Mr. Fistick.

Individual attention to the solution of problems in creative use of design materials, i.e., woods, base and precious metals, plastics, paper, fabrics, glass, etc.

***539. Stage Design.** Five credit hours. Spring Quarter. Five two-hour laboratory periods each week.

The basic principles of stage design: a study of line, form, mass, and color with relation to plastic forms in space. The construction of models. Source material for period plays. This is an elementary course, requiring no drawing ability, offered to meet the needs of stage designers and teachers of dramatic and fine arts.

576. Interior Design. Five credit hours. Autumn Quarter. One three-hour and four two-hour laboratory periods and one one-hour lecture each week. Prerequisite, Fine Arts 432 and 500. Miss Krumm.

A study of the relationship between the student's broad art knowledge and the field of interior design. Emphasis on the realization of full scale architectural space. An introduction to the materials of the field. Field trips.

Not open to students who have credit for Fine Arts 602.

603. Interior Design. Five credit hours. Winter Quarter. One three-hour and four two-hour laboratory periods and one one-hour lecture each week. Prerequisite, Fine Arts 576, 503, and Architecture 572. Miss Krumm.

Continuation of the study of materials of the field. Planning domestic, public, and industrial interiors. Presentation through models, maquettes, working drawings, and sketches. Field trips.

Not open for graduate credit.

604. Interior Design. Five credit hours. Spring Quarter. One three-hour and four two-hour laboratory periods and one one-hour lecture each week. Prerequisite, Fine Arts 603. Miss Krumm.

* Not given in 1956-1957.

A study of factors as necessary prerequisites for designing successful interiors. Emphasis placed on carrying a design to its final stage of development. Study of professional procedure and ethics. Field trips.

Not open for graduate credit.

631. Advanced Costume Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods each week, with outside problems. Prerequisite, Fine Arts 437, 505, or permission of the instructor.

This course emphasizes the professional level of costume design, through work making original costumes, presentation, and knowledge of present fashion trends, with emphasis on the ensemble.

Not open for graduate credit.

DRAWING

401. Introduction to Fine Arts Activities. Three credit hours. One Quarter. Autumn, Winter, Spring. For students in the University at large except B.F.A. majors, students in Dentistry, and students in Architecture. Four one-hour laboratory periods and one lecture each week. Mrs. Gatrell.

An introduction through participation to the principles of visual organization that underlie all art. Experimentation with drawing, painting, and tri-dimensional design. Since the emphasis is upon the art process rather than upon the finished product, prior art training is not prerequisite. Lectures, discussion, and reading supplement the laboratory experience.

Not open to students who have credit for Fine Arts 421.

402. Freehand Drawing. Three credit hours. Spring Quarter. Three two-hour laboratory periods weekly or two three-hour laboratory periods weekly. Not open to candidates for the degree, B.F.A. or B.Sc. in Education with Fine Arts as a major. Prerequisite, Fine Arts 401.

Continued practice through a variety of media in the use of visual form principles with an emphasis on their relationship to other modes of art expression.

Not open to students who have credit for Fine Arts 421 or 423.

404-405. Advanced Freehand Drawing. Three credit hours. Autumn and Winter Quarters. Three two-hour laboratory periods each week, with weekly problems. Not open to majors in Fine Arts. Prerequisite, Fine Arts 401-402, or 421.

Not open to students who have credit for Fine Arts 423.

406. Form Organization. Three credit hours. Autumn Quarter. Three two-hour laboratory periods each week. Not open to majors in Fine Arts. Mr. Bogatay, Mr. Sherman, Mr. Friley.

This course is for dental students only. It consists of work in drawing and carving (sculpture), with a central emphasis upon seeing with *perceptual unity*. The drawing aspect of the course consists of drawing in total darkness from models exposed for 1/10 of a second, ranging in character from abstract patterns to the tooth proper. The carving aspect places particular emphasis on motor skills in the organization of *form*. Materials such as clay, plastic, and wire are used. Both the drawing and the carving operations are reduced progressively throughout the term to place an emphasis on digital activity.

411-412. Drawing from Life. Three credit hours. Both 411 and 412 are given Autumn, Winter and Spring Quarters. Two three-hour periods each week, with outside problems. Not open to majors in Fine Arts. Prerequisite, Fine Arts 404-405 or 423. Mr. Chadeayne, Mr. Gatrell, Mr. King.

Drawing from the living model with lectures and problems in surface anatomy.

421. Drawing and Fine Arts Orientation. See under Basic Art.

423. Drawing. See under Basic Art.

505. Life Drawing. See under Basic Art.

625. Advanced Life Drawing. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Fine Arts 505. Mr. Chadeayne, Mr. Gatrell, Mr. King.

Advanced problems in drawing from life and figure composition.

GRAPHIC ARTS

643. Graphic Processes. Five credit hours. One Quarter. Winter and Spring. Prerequisite, Fine Arts 427 or 500. Graduate students must have had fifteen Quarter hours of course work in drawing and painting. Mr. Gatrell.

This course will explore the possibilities in the processes of intaglio, relief and planographic modes of graphic reproduction. An opportunity for experimental and professional experience in the numerous forms of print making such as lithography, etching, silk screen, etc.

PAINTING

407-408. Water Color Painting. Three credit hours each. Both 407 and 408 are given Autumn and Spring Quarters. Two three-hour periods each week. Not open to majors in Fine Arts. Prerequisite, Fine Arts 404-405 or 422. Mr. Gibbons.

Painting from still life, models, and landscape. Lectures, laboratory work, and criticisms.

500. Basic Art—Painting. See under Basic Art.

527. Water Color Painting. Five credit hours. One Quarter. Autumn and Spring. Five three-hour periods each week. Prerequisite, Fine Arts 427 or 500 and 432.

The use of the medium of water color with special emphasis on its unique capacities for personal expression. Problems in landscape, still life and the figure.

528. Oil Painting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week. Prerequisite, Fine Arts 427 or 500 or 503 and 431. Mr. Chadeayne, Mr. Gatrell, Mr. King.

Painting from still life with the object of developing the color sense and acquiring directness of presentation. Problems in the organization and execution of pictures.

630. Advanced Water Color Painting. Five credit hours. One Quarter. Autumn and Spring. Prerequisite, Fine Arts 505 and 527.

Painting from still life, models, and landscapes. Special problems in organization and development of pictures. This course is particularly suited to graduate students who plan to present a thesis in water color painting.

644. Advanced Water Color Painting. Five credit hours. One Quarter. Autumn and Spring. Five three-hour periods each week. Prerequisite, Fine Arts 527.

Further practice in the water color medium with emphasis on the critical capacity of the student. Laboratory problems and field trips.

Not open for graduate credit.

***645-*646-*647. Portrait Painting.** Five credit hours. Autumn, Winter, and Spring Quarters. Five three-hour periods each week. Prerequisite, Fine Arts 505 and 560 or 660. Mr. Chadeayne, Mr. Gatrell, Mr. King.

Painting from life. The organization and development of pictures with special reference to the delineation of character.

***650. Methods and Materials of the Painter.** Three credit hours. Autumn Quarter. Prerequisite, Fine Arts 660. Mr. Grimes.

A study of painting materials, the composition of pigments, binders, and varnishes. A review of ancient methods of painting with a consideration of their possibilities for contemporary use. Egg tempera, varnish tempera, under-painting, and oil glazes. Laboratory practice and lectures.

660. Advanced Oil Painting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week with weekly problems. Prerequisite, Fine Arts 505 and 528.

Painting in oil from still life and the costume model. Advanced problems in composition.

Not open for graduate credit.

SCULPTURE

561. Sculpture. See under Basic Art.

* Not given in 1956-1957.

562. Advanced Sculpture. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour laboratory periods each week, with weekly problems. Prerequisite, Fine Arts 461 or 561.

Special emphasis on individual composition projects; an introduction to methods of plaster casting; carving in wood and stone.

WEAVING

572. Elements of Weaving. Five credit hours. One Quarter. Autumn, Winter, and Spring. Five two-hour periods each week. Prerequisite, Fine Arts 431.

An introductory course in the creative processes of weaving with research, and practical design experience. The making and using of small hand looms, working with numerous materials, weaves and simple patterns, with a study of the construction, warping, threading and manipulation of table and foot power looms.

573. Creative Weaving. Three credit hours. One Quarter. Autumn, Winter, and Spring. Three two-hour periods each week. Prerequisite, Fine Arts 431.

Lectures and research will supplement the use of weaving materials, patterns and pattern drafting, warping, threading, treadling, and the weaving of standard and special weaves on multiple harness looms.

TECHNICAL PROBLEMS

NOTE: For further specialization in any technical field students may enroll in the following courses:

661-662-663. Technical Problems. Two to five credit hours. The sum total of credit taken in these courses must not exceed forty-five hours. Autumn, Winter, and Spring Quarters. Open by permission of the department to students in technical fields who have completed the other laboratory courses in their areas and who wish an opportunity for further research in specialized problems. Mr. Severino, Mr. Atherton, Mr. Barkan, Mr. Bogatay, Mr. Fanning, Mr. Frey, Mr. Grimes, Mr. Littlefield, Mr. Seiberling, Mr. Sherman, Mr. Chadeayne, Mr. Gatrell, Mr. King, Mr. Rannells, Mr. Wood, Mrs. Fetzner, Mr. Hausman, Mr. Kaplan, Miss Krumm, Mr. Wood, Mr. Csuri, Mr. Collins, Mr. Friley, Mr. Fistick, Mr. Patton, Mr. Ludden.

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|--------------------|----------------------------------|
| (a) History | (i) Interior Design |
| (b) Commercial Art | (j) Jewelry |
| (c) Ceramics | (k) Drawing |
| (d) Design | (m) Medical Art |
| (e) Art Education | (p) Oil and Water Color Painting |
| (f) Costume Design | (s) Sculpture |
| (g) Graphic Art | (x) Field Experience Work |
| (h) Weaving | |

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

FLIGHT TRAINING

Ohio State University Airport

MR. TRITT, MR. JONES

400A. Primary Flight Training. No credit. One Quarter. All Quarters. Total of twenty flying hours. Approximately three hours each week. Prerequisite, Flight Training 401 and 402, which may be scheduled concurrently. Student should contact University Airport before scheduling.

This course is for students with little or no previous flying experience. It is designed to train the student in the fundamental techniques in preparation for solo flight.

400B. Primary Flight Training. One credit hour. One Quarter. All Quar-

ters. Total of twenty flying hours. Approximately three hours each week. Prerequisite, Flight Training 400A. Students should contact University Airport before scheduling.

A continuation of Flight Training 400A. Elementary maneuvers, strange field landings, cross-country procedures. Develops flying technique and aeronautical experience as required by the Civil Aeronautics Administration for private pilot's certificate.

401. Aircraft Operation, Air Traffic Rules and Meteorology. Two credit hours. One Quarter. All Quarters. Three recitations each week.

Practical elementary operation and care of small type aircraft, precautions in handling aircraft on the ground and in the air, air traffic rules, general aviation information for the student pilot and aeronautical meteorology.

402. Elementary Aeronautical Navigation. Two credit hours. One Quarter. All Quarters. Three recitations each week.

This course covers elementary pilotage, dead reckoning, aeronautical chart reading, drift problems, deviation and variation problems, contact orientation and radio.

403. Fundamental Flight Training. One credit hour. One Quarter. All Quarters. Total of ten hours dual flying and 20 hours lecture. Approximately two hours flying and two hours lecture each week. Student should contact University Airport prior to or not later than the first day of the Quarter.

This course has been arranged to give the student a general knowledge of the basic fundamentals of flying and methods of cross-country navigation.

501. Aircraft Engines. Two credit hours. One Quarter. Autumn and Spring. Two recitations each week.

Operation and construction of aircraft engines, including cooling, lubrication, carburetion and ignition systems and operation of aircraft propellers.

502. Aircraft and Theory of Flight. Two credit hours. One Quarter. Winter and Summer. Two recitations each week.

Elementary theory of flight, aircraft design and aircraft structures.

503. Aeronautical Meteorology. Two credit hours. Autumn and Spring Quarters. Two recitations each week. Prerequisite, Flight Training 401; and Physics 420.

A study of meteorology as it affects flying.

504. Intermediate Aeronautical Navigation. Two credit hours. One Quarter. Winter and Summer. Two recitations each week. Prerequisite, Flight Training 402 or equal.

Aeronautical charts, methods of navigation, pilotage, dead reckoning, and radio navigation as required by the Civil Aeronautics Administration.

510. Secondary Flight Training. One credit hour. All Quarters. Total of forty flying hours. Approximately five hours each week. Prerequisite, Private Pilot Certificate, and Flight Training 501 which may be scheduled concurrently. Students should contact University Airport before scheduling.

A continuation of the training received in Primary Flight Training for the purpose of developing a higher degree of coordination and judgment through additional training in more developing maneuvers and cross-country flying.

515. Intermediate Flight Training. One credit hour. All Quarters. Total of forty flying hours. Approximately five hours each week. Prerequisite, Flight Training 510, 501, and Flight Training 502 and 504 which may be scheduled concurrently. Student should contact University Airport before scheduling.

A continuation of the training received in Flight Training 510. Includes night flying, instrument flying, and extensive cross-country flying.

520. Advanced Flight Training. One credit hour. All Quarters. Total of forty flying hours. Approximately five hours each week. Prerequisite, Flight Training 510, 515, 502, and 504; and Flight Training 501, 503, and Physics 420 which may be scheduled concurrently. Student should contact University Airport before scheduling.

A continuation of the training received in Flight Training 515. Emphasis is placed on perfecting the maneuvers and procedures previously introduced. Includes transition to advanced type aircraft, developing technical and aeronautical experiences as required by the Civil Aeronautics Administration for Commercial Pilot's Certificate.

530. Instructor Training. One credit hour. All Quarters. Total of thirty-five flying hours. Approximately four hours each week. Prerequisite, Commercial Pilot Certificate or Private Pilot Certificate with aeronautical experience requirements for Commercial Pilot Certificate; concurrent Flight Training 532, and permission of the Director. Students should contact University Airport before scheduling.

Teaches the student how to be a Flight Instructor. It emphasizes clarity of expression in explaining maneuvers and correcting errors. The instructor acts as a student and simulates the usual errors made by the student.

532. Analysis of Flight Maneuvers. Two credit hours. All Quarters. Two recitations and one hour of conference each week. Prerequisite, concurrent Flight Training 530 and permission of the Director.

A presentation of flight maneuvers involved in aircraft pilot training with emphasis on: the theory of flight involved in each maneuver; analysis of student errors involved in learning each maneuver, and the actual teaching of each maneuver, which involves both adequate language and clarity of explanation. Included are classroom recitation and criticism of oral explanations and analysis of each maneuver. A portion of the time will be devoted to methods of grading student flights.

540. Instrument Training. One credit hour. All Quarters. Total of twenty flying hours and twenty hours in Link simulated instrument trainer. Approximately five hours each week. Prerequisite, Commercial Pilot Certificate or Private Pilot Certificate with aeronautical experience requirement for Commercial Pilot Certificate; concurrent or prior Flight Training 542, 503, and Physics 420, and permission of the Director.

Teaches flight by reference to instruments only and covers basic instrument flight, radio navigation and orientation, and instrument approaches. All procedures are first presented in the Link trainer.

542. Radio Orientation and Procedures. Two credit hours. All Quarters. Two recitations and one hour of conference each week. Prerequisite, concurrent Flight Training 540 and permission of the Director.

This course is designed to familiarize the trainee with the fundamentals of instrument flying and the difficulties likely to be encountered and rectification of same, such as pilot's reaction while flying solely by reference to instruments; the procedures and methods used in navigation; orientation and letdowns by use of radio. The analysis of each maneuver as flown by reference to the primary group of instruments and complete panel instruments. The use of the Dalton Aeronautical Computer is also taught.

NOTE: For course in Descriptive Meteorology see Physics 420.

FRENCH

(See Romance Languages and Literature)

GENERAL STUDIES

Office, 107 University Hall

PROFESSOR OYLER, ASSOCIATE PROFESSOR HESTHAL

431. Nature of the Physical World. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures and one demonstration period each week. The McMillan Observatory and its refracting telescope will also be used for observation. Mr. Hesthal.

This course ignores distinctions between modern physics and astronomy and discusses phenomena that are commonly encountered or likely to be encountered by the average individual. It selects its subject matter from both sciences in such a way as to give an elementary but comprehensive picture of the physical universe. Phenomena including the latest developments in science are discussed in a descriptive, explanatory manner and no previous scientific or mathematical training is assumed.

432. Nature of the Physical World. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures and one demonstration period each week. The McMillin Observatory and its refracting telescope will also be used for observation. Mr. Hesthal.

A continuation of General Studies 431. It is not necessary that General Studies 431 precede this course.

520. Factors in Successful Marriage. Three credit hours. One Quarter. Autumn, Winter, Spring. Mr. Oyler and others.

The objectives of the course: to create an intelligent understanding of the possibilities of successful married life; to aid the student in the development of emotional maturity stressing such factors as a sensible attitude toward sex, a sense of responsibility, etc.; to acquaint the student with those human characteristics that are most closely correlated with successful marriage; to make the student aware of the types of problems that are most frequently faced by married couples and to point out the methods whereby they may be dealt with successfully.

GENETICS

Instruction in genetics is given by various departments. The basic and theoretical courses, both elementary and advanced, are given in the Department of Zoology and Entomology and Botany and Plant Pathology. Practical courses are given in the specialized departments; applied animal genetics in the Departments of Dairy Science and Poultry Science, and applied genetics in the Departments of Agronomy and Horticulture. Descriptions of courses appear, under the respective departments, in the bulletin of the College of Agriculture and Graduate School.

GEOGRAPHY

Office, 136 Hagerty Hall

PROFESSORS SMITH, VAN CLEEF, CARLSON, AND WRIGHT, ASSOCIATE PROFESSOR RANDALL, ASSISTANT PROFESSORS HOFFMAN AND BASILE, AND MR. HUNKER, LECTURERS, AND ASSISTANTS

The course in the field of geography and related subjects may be grouped as follows:

- I. Physical environment: 401, 505, 615, 621, 624, 625, 626, 627, 701; Geology, 601, 610 and 611; Physics 420.
- II. Economic and cultural geography: 403, 503, 603, 604, 634, 651, 701.
- III. Regional geography: 505, 605, 621, 624, 625, 626, 627; Geology 610 and 611.
- IV. Techniques: 510, 611, 700, 701, 702; Geology 615; Economics 522.
- V. Political and historical geography: 505, 621, 624, 625, 626, 627, 651, 701, 712.
- VI. Commerce: 631, 633, 634; Business Organization 665, 720, 721.

401. Introduction to Geography. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Mr. Carlson, Mr. Basile, Mr. Hunker, and assistants.

The elements of the natural environment, their characteristics, their distribution and their relation to population density and human activities. Geography in relation to the physical and social sciences.

403. Economic Geography. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Geography 401. Mr. Van Cleef, Mr. Smith, Mr. Wright, Mr. Randall, Mr. Hoffman.

The geography of the world's commodities and their regional aspects; a survey of the economic activities of the principal political divisions of the world in the light of their geographic conditions. An analysis of economic geographic factors in current international affairs.

503. Fundamentals of Economic Geography. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, third year standing. Mr. Hoffman.

A survey of the elements of the human habitat with particular emphasis on the major world resources. A consideration of the geographical and economic factors which have been and are important in the development of the major industries and the chief industrial areas of the world.

Not open to students who have credit for Geography 403.

505. Geography of the United States and Canada. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Geography 403. Mr. Wright, Mr. Randall, Mr. Basile.

A geographic analysis of the United States and Canada; the correlation of their natural resources and other environmental factors with their economic and social structure and development.

510. An Introduction to Cartography. Three credit hours. Autumn Quarter. Three class meetings each week. Required in the Curriculum in Geodesy, Photogrammetry and Cartography in the College of Arts and Sciences. Mr. Basile.

A lecture and drawing course on the use of cartographic techniques. Particular attention will be given to problems of map compilation, scales, generalization, symbolization, grid systems, reproduction techniques, and map-making instruments and equipment.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

603. Localization of Manufacturing Industries. Three credit hours. One Quarter. Winter and Spring. Three class meetings each week. Prerequisite, Geography 401 and 403 or Economics 401 and 402 or fourth or fifth year standing in Engineering. Mr. Wright.

The geography of manufacturing with particular emphasis on American industries and industrial districts. Special study of representative industries as to: labor supply, sources and value of materials and power used, transportation, and the character and location of markets.

604. Conservation of Natural Resources. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403, or fifteen hours of allied subjects. Mr. Wright.

The importance of our natural resources and the need for their conservation. Land as a natural resource and economic factor. Character and location as factors in land utilization and value. Regional and national planning for resource utilization.

605. Geography of Ohio. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403, or fifteen hours of allied subjects. Mr. Wright.

Geographic influences in the history of the state. Ohio's agriculture, industries, and social conditions, together with the underlying physical and other environmental factors that have contributed to the present development of the region.

611. Cartography and Map Interpretation. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403, or ten hours of allied subjects. Mr. Smith.

The interpretation and appreciation of maps. A graphical and geometrical consideration of the major systems of map projections and their use for cartographic purposes. A survey and analysis of the various map series published by the several map-making agencies of the United States government, by foreign countries, and by private map-producing organizations.

615. Climatology. Four credit hours. Autumn Quarter. Four class meetings each week. Prerequisite, fifteen hours in natural or social science including one of the following courses: Geography 401, Physics 420, Botany 402 or Agronomy 501. Mr. Smith.

Elements of climate and their distribution. The controls of climate. Types of climate and their distribution with particular reference to agricultural production, natural vegetation and the major soil groups. Climates and their effects on the economic and other activities of man.

621. Geography of Europe. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to Seniors and graduating students majoring in economics, history, political science or other closely related fields, with permission of the department. Mr. Van Cleef.

The geographic factor in the economic, social, and political progress of the nation. Current major problems of the continent in the light of their geographic background. Consideration given to some geopolitical problems.

624. Geography of Latin America. Three credit hours. Winter Quarter.

Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to Senior and graduate students majoring in economics, history, political science, or other closely related fields, with permission of the department. Mr. Carlson.

Geographic regions of Mexico, Central America, the West Indies, and South America. The development of the political divisions in relation to their geographic conditions. Special emphasis is placed on the geographic analysis of inter-American affairs.

625. Geography of the Far East. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to Seniors and graduate students majoring in economics, history, political science, or other closely related fields, with permission of the department. Mr. Hoffman.

The geographical character and regional divisions of monsoon Asia. The major activities of the people in the regions of densest population and greatest economic importance.

626. Geography of the Middle East. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to Seniors and graduate students majoring in economics, history, political science or other closely related fields with permission of the department. Mr. Randall.

Geographic concept of the Middle East. A consideration of its natural regions in relation to the local and international political problems. The importance of the physical and cultural patterns in relation to the current economics.

***627. Geography of Africa.** Three credit hours. Winter Quarter. Given in alternate years. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to seniors and graduate students majoring in history, political science, sociology, and closely related fields with permission of the department.

The geographic character of Africa. A consideration of structure, climate, problems of disease, population, resources, and economies, both native and introduced. A study of the chief regions of Africa with particular emphasis on the areas and countries of greatest economic and international importance.

631. The Historical Geography of Commerce. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403, or History 401 and 402. Mr. Hoffman.

Geographic factors in commerce to 1800. Resources and production in the ancient and medieval world. Trade routes in relation to exchange of ideas. Geographic elements in the early origin of many present-day commercial practices.

633. The Geography of Modern Commerce. Three credit hours. One Quarter. Autumn and Spring. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to senior students majoring in economics or political science. Mr. Carlson.

Unequal distribution of natural resources and differences in industrial and social development as basic factors in interregional trade. A consideration of the major raw materials and other important commodities in international commerce. Geographic factors in the establishment and development of trade routes. Concluded with a discussion of major trade areas.

634. Urban Geography. Three credit hours. One Quarter. Winter and Spring. Three class meetings each week. Prerequisite, Geography 401 and 403 and senior standing. Mr. Van Cleef.

Geographic factors in the origin and growth of urban centers. Analysis and synthesis of the economic and physical structure and functions of trade centers in the light of their geographic setting; areal expansion; and inter-trade center relations. Each of the foregoing aspects examined in relation to city planning.

651. Philosophy of Cultural Geography. Three credit hours. Autumn Quarter. Given in alternate years. Three class meetings each week. Prerequisite, Geography 401 and 403, or History 401 and 402. Mr. Randall.

An advanced course in human geography treating of environmentalism, regionalism, and other doctrines which find expression in politics, literature, and the arts. A critical examination of the philosophical elements in geography.

***700. Field Work in Geography.** Two credit hours. Spring Quarter. Prerequisite, twelve hours of geography. Given in alternate years. Mr. Basile.
A course in the practice of field observation and geographic mapping.

701. Special Problems in Geography. Two to fifteen credit hours. Autumn, Winter and Spring Quarters. Assigned readings, conferences and reports. General prerequisites must include eighteen hours of geography and consent of the instructor.

Individual study of a special problem or a particular region.

712. Political Geography. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, fifteen hours of political science including Political Science 613, or thirteen hours of geography. Mr. Randall.

The geographical characteristics of political areas. A consideration of size, shape, frontiers, resources, and technological advancement in relation to economic and political strength. Land power versus sea power. Buffer states. Geographical aspects of colonialism. The geographical factor in geopolitics. Special attention will be given to selected areas and problems of historical and current importance.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GEOLOGY

Office, 103 Orton Hall

PROFESSORS LAMEY, SPIEKER (RESEARCH PROFESSOR), GOLDTHWAIT, FULLER, MELVIN, SCHOFF, AND LaROCQUE, ASSOCIATE PROFESSORS BATES AND PINCUS. ASSISTANT PROFESSORS SUMMERSON, MOORE, WHITE, WEISS, AND MARPLE (CURATOR), MR. SWEET, AND ASSISTANTS

401. Elementary Physical Geology. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures and one two-hour laboratory period each week. One half-day field trip is required except in the Winter Quarter. Mr. White and staff.

A study of the materials of the earth's crust; of the structural features of the earth's crust and how they were formed; and of the surface features of the earth and their origin. In the laboratory the common minerals and rocks and topographic maps are studied.

402. Elementary Historical Geology. Five credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings and one two-hour laboratory period each week. One half-day field trip is required except in the Winter Quarter unless credit was received in Geology 401 when the field trip was taken. Prerequisite, Geology 401 or 435 or 451. Mr. LaRocque and staff.

An elementary study of the geologic history of the earth and its inhabitants. In the laboratory, the common types of fossils and geological maps are studied.

451. Introduction to Geology. Five credit hours. One Quarter. Autumn and Winter. Four class meetings and one two-hour laboratory period each week. One half-day field trip is required. Mr. Pincus, Mrs. Marple.

A study of the development of the earth's surface and its inhabitants of the past, with special emphasis on the collection and evaluation of geological evidence and on the nature of geological reasoning; interpretation of landscape and utilization of earth materials.

Not open to students who have credit for Geology 401 or General Studies 451.

504. Laboratory Study of Topographic Maps. Two credit hours. One Quarter. Autumn and Winter. Two two-hour laboratory periods each week. Prerequisite, Geology 401 or 435, or 451. Mr. Weiss.

Reading of topographic maps and interpretation of geologic and geographic features from topographic maps.

* Not given in 1956-1957.

505. Laboratory Study of Geologic Maps. Three credit hours. One Quarter. Winter and Spring. Three two-hour laboratory periods each week. Prerequisite, Geology 402 and 504. Mr. Summerson.

Study of the elements of geologic maps, including the geologic uses of aerial photographs.

520. Invertebrate Paleontology. Five credit hours. One Quarter. Autumn and Spring. Prerequisite, Geology 402. Mr. LaRocque, Mr. Sweet.

A systematic survey of the groups of the invertebrate animals significant in the geologic record.

525. The Common Rocks. Three credit hours. One Quarter. Autumn and Winter. One class meeting and two two-hour laboratory periods each week. Prerequisite, Geology 401 or 435, Mineralogy 401 and Mineralogy 402 which may be studied concurrently. Mr. Moore.

A study of the common rocks, their associations and occurrences, and elementary concepts regarding their origin.

526. The Common Mineral Deposits. Three credit hours. One Quarter. Winter and Spring. One class meeting and two two-hour laboratory periods each week. Prerequisite, Geology 525. Mr. Pincus.

A study of the materials composing the common mineral deposits, their associations and relations; elementary concepts regarding the origin of mineral deposits.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Geomorphology. Five credit hours. Autumn Quarter. Four class meetings and one two-hour laboratory period each week. Saturday must be kept open for field trips. Prerequisite, Geology 504. Mr. Goldthwait.

A detailed study of the processes which shape the land surface and the forms produced. These are inspected on topographic maps and in the area near Columbus.

602. Structural Geology. Five credit hours. Winter Quarter. Four class meetings and one two-hour laboratory period each week. Prerequisite, Geology 505, Engineering Drawing 401 and Mathematics 417 or 422. Mr. Moore.

A study of the principal kinds of geologic structure, mainly descriptive and diagnostic but in some part interpretative. Practice in the recognition, analysis, depiction, and measurement of structure on geologic maps and sections, and by various mathematical devices, graphic as well as computational.

***608. Stratigraphic Geology of Ohio.** Five credit hours. Autumn Quarter. Given in alternate years. Prerequisite, Geology 618, and consent of the instructor.

Field trips with reports, lectures, and assigned readings. Field trips on Saturdays (entire day) while the weather permits.

The geological formations of Ohio are studied in the field, by rock specimens, and by assigned readings. This course is intended to acquaint the student with the rock formations of Ohio.

610. Geomorphology of Eastern United States. Four credit hours. Autumn Quarter. Four class meetings each week. Given in alternate years. Prerequisite, four Quarters of geology, or of geology and geography, including Geology 601. Mr. White.

A study of the physiographic regions of the United States east of the Great Plains. The topographic form and physiographic history with a resume of geologic history and background.

613. Glacial Geology. Five credit hours. Spring Quarter. Saturday must be kept open for field trips. Prerequisite, elementary courses in geology and preferably Geology 601. Mr. Goldthwait.

Living glaciers and the features produced by glaciers, present or past, with special reference to the features produced in Ohio.

618. Paleozoic Stratigraphy. Three credit hours. Winter Quarter. Prerequisite, Geology 402 and 520. Mr. Bates.

* Not given in 1956-1957.

The principles of stratigraphy and related historical geology, developed by study of selected American and European Paleozoic examples.

619. Mesozoic and Cenozoic Stratigraphy. Three credit hours. Spring Quarter. Prerequisite, Geology 402 and 520. Mr. Spieker.

The principles of stratigraphy and related historical geology, developed by study of selected American and European Mesozoic and Cenozoic examples.

622. Survey of Vertebrate Paleontology and Paleobotany. Three credit hours. Winter Quarter. Three two-hour class-laboratory meetings each week. Given in alternate years. Prerequisite, Geology 520. Mr. La Rocque.

The paleontology and paleoecology of fossil plants and vertebrates.

624. Advanced Invertebrate Paleontology. Three credit hours. Autumn Quarter. Six hours of laboratory work each week. Prerequisite, Geology 520. Mr. La Rocque.

Laboratory study of fossil faunas, including paleontological techniques and procedures.

†627a. Field Geology. Six credit hours. Summer Quarter. Prerequisite, Geology 504, 505, 525, 615, and consent of the instructor; Geology 520, 618, and 619 are recommended. Mr. Spieker and staff.

Concentrated training in the basic essentials of field observation and mapping. The course occupies the full time of the student through the term. The work is done in central Utah, with headquarters in Ephraim.

This course does not carry graduate credit towards the Master's degree.

Not open to students who have credit for Geology 627. This course is the first half of Geology 627.

†627b. Field Geology. Six credit hours. Summer Quarter. Prerequisite, Geology 627a. Mr. Spieker and staff.

This course is the direct continuance of Geology 627a.

This course does not carry graduate credit towards the Master's degree.

Not open to students who have credit for Geology 627. This course is the second half of Geology 627.

629. Geologic Report. Three credit hours. Autumn Quarter. Prerequisite, Geology 627b. Mr. La Rocque, Mr. Moore, Mr. White, Mr. Weiss, Mr. Sweet.

Preparation of geologic report based on field data obtained in Geology 627a and 627b.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GERMAN

Office, 218 Derby Hall

PROFESSOR SEIDLIN, ASSOCIATE PROFESSOR FLEISCHHAUER, ASSISTANT PROFESSOR WONDERLEY, MR. GOODMAN, MR. BURCKHARDT, AND ASSISTANTS

Courses 401-402-403-404, or their equivalent, are prerequisite to all other offerings in the department.

Courses for advanced undergraduates fall into three groups: literary, linguistic, and practice. Majors may emphasize any one group, but should confer with the department before planning their program.

A student majoring in German must, after consultation with his adviser, select in his junior and senior years 40 to 60 hours of advanced work in this and related departments such as: History, Fine Arts, Philosophy, Romance Languages, English, Classical Languages, Music.

ELEMENTARY GERMAN FOR SELECTED STUDENTS

The department offers a special course in elementary German (416-417-418) for highly qualified students. Admission is granted only upon the basis of examination.

† Not given during the academic year, 1956-1957.

PLACEMENT AND PROFICIENCY EXAMINATIONS

Students with two years of high school German register for German 403; however, in order to insure proper registration, placement tests are required of all students who continue their study of German in the department after beginning their language elsewhere. Such tests are held during Freshman Week and at the beginning of each Quarter.

Students who are given advanced standing in the Department as a result of the placement and proficiency examination become eligible for University credit.

EXCESS ENTRANCE CREDITS IN GERMAN

Freshmen who have excess credits in foreign language are eligible for examination for advanced standing. This examination is given at the same time as the placement tests mentioned above.

THE GERMAN CLUB

The German Club is an undergraduate organization designed to bring the students and the staff together in informal meetings. Students who wish to participate should consult their instructors.

THE GERMAN TABLE

The German Table, supervised by members of the department, offers additional opportunity to use the language informally. Those interested should consult their instructors.

401. Elementary German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. All instructors.

The elements of German grammar. Reading of easy prose. Oral and written practice.

402. Elementary German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 401 or equivalent. All instructors.

The elements of German grammar. Reading of easy prose. Oral and written practice.

403. Intermediate German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 402 or equivalent. All instructors.

Reading of narrative prose. Oral and written practice. Grammar review.

404. Intermediate German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 403 or equivalent. All instructors.

Reading of narrative prose; oral and written practice.

†412. Intensive German. Fifteen credit hours. Fifteen recitations each week.

This is a course in elementary and intermediate German in which for one Quarter the student will devote his entire time to the mastery of German. The approach will be from oral practice, but the elements of German grammar will be thoroughly studied with written exercises. Also reading from German literature.

The course is especially planned for students who desire to gain a comprehensive knowledge of German in the shortest space of time, as, for instance, for governmental or commercial service. The number of students will be limited to fifteen. Permission of instructor is required.

German 412 will be given only if a minimum of ten students elect the course.

Not open to students who have credit for German 401-402-403.

416-417-418. Elementary German for Selected Students. Five credit hours. Autumn, Winter, and Spring Quarters. Five recitations each week. Mr. Wonderley, Mr. Goodman.

The special course in German is open only to students who are selected by examination, from all regular 401 sections at the beginning of the Autumn Quarter. For students who complete the course, German 404 is waived as a prerequisite for the 500-group (fifth and sixth Quarters).

***500. Kulturkunde. Three credit hours. Winter Quarter. Prerequisite, four Quarters of German or permission of the department. Given biennially. Mr. Wonderley.**

A study of the cultural development of Germany. Lectures in very simple German, dealing with the people, institutions, intellectual and spiritual phases of German civilization. Outside readings in English and German.

* Not given in 1956-1957.

† Not given during the academic year, 1956-1957.

507. Elementary Conversation and Composition. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, German 404 with a minimum grade of "C" or equivalent. It is required of students taking German as a major subject. All instructors.

An introductory course in speaking and writing German accompanied by a systematic review of German grammar.

575-576-577. Introduction to German Literature. Five credit hours each Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 404, 418, or equivalent. Students with special aptitude in German are advised to register also in German 507. All instructors.

Students may offer courses in this group in partial fulfillment of requirements in literature under the B.A. curriculum.

575. Autumn Quarter. German Literature of the Classical Period. Readings from representative authors as Lessing, Goethe, and Schiller.

576. Winter Quarter. German Literature of the Nineteenth Century. Readings from representative authors as Heine, Storm, Keller, Hebbel, Meyer.

577. Spring Quarter. Modern German Literature. Readings from representative authors as Fontane, Mann, Hauptmann, Schnitzler.

590. German Literature in Translation from Goethe to Thomas Mann. Three credit hours. Winter Quarter. Designed for students not majoring in German. Mr. Seidlin.

The struggle of social and intellectual forces in Germany from the Age of Enlightenment to the present, as reflected in German literature. Study of significant literary masterpieces with special emphasis upon Goethe, the Romantics, Kleist, Heine, Nietzsche, and Thomas Mann.

This course partially fulfills the B.A. and B.Sc. requirement in literature.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Prerequisite for "600" courses: ten hours of "500" courses in the department. Exceptions may be allowed by instructors for students with special qualifications.

1956-1957:

611. German Literature of the Eighteenth Century. Three credit hours. Autumn Quarter.

A study of the rise of Enlightenment in Germany, with special emphasis on Lessing and Schiller.

612. Goethe's Faust. Three credit hours. Winter Quarter.

The history of the Faust legend from the Sixteenth Century to Goethe. Reading and discussion of the drama.

613. Goethe's Life and Works. Three credit hours. Spring Quarter. Mr. Seidlin.

The development of Goethe's art and personality. His significance for modern times.

1957-1958:

614. German Romanticism. Three credit hours. Autumn Quarter. Mr. Seidlin.

The romantic revolt against the ideas of classical humanism. Novalis, the Schlegels, Tieck, Kleist, Eichendorff, E. T. A. Hoffman.

615. German Literature of the Nineteenth Century. Three credit hours. Winter Quarter.

Social and literary forms in Germany from the death of Goethe to the founding of the German Reich.

616. Contemporary German Literature. Three credit hours. Spring Quarter.

The main currents of German thought and literature from Nietzsche to the present. Special emphasis on Hauptmann, Rilke, and Thomas Mann.

617. Survey of German Literature. Three credit hours. Spring Quarter. Given in alternate years.

An historical survey of German literature from Luther to the present, especially for majors in the senior year.

†**650. Proseminar.** Three credit hours. Summer Quarter.

656. Introduction to the Historical Study of German. Three credit hours. Winter Quarter. Three hours lecture and drill each week. Given biennially, alternating with 801, 805, 810. Prerequisite, six Quarters of German or equivalent. Mr. Fleischhauer.

Survey of the history of the German language. Relations between German and English phonology. History of words and meanings.

673. Elementary Middle High German. Three credit hours. Autumn Quarter. Given biennially, alternating with 801, 805, 810. Prerequisite, six Quarters of German or equivalent. Mr. Fleischhauer.

Introduction to the study of Middle High German with the reading of easy texts.

***676. Introduction to Sixteenth and Seventeenth Century German.** Three credit hours. Spring Quarter. Given in alternate years. Prerequisite, six Quarters of German or the equivalent.

A study of the language and literature of the Sixteenth and Seventeenth Centuries. Readings from Luther, Hans Sachs, Fischart, the *Volksbücher*, selections from Seventeenth Century authors. Lectures and discussions on their contribution to the German language and literature.

685. Advanced Composition. Three credit hours. Winter Quarter. Three hours lecture and quiz each week. Prerequisite, six Quarters of German. Mr. Burckhardt.

An advanced course in speaking and writing German, accompanied by a review of German syntax.

***691. Practical German Pronunciation.** Two credit hours. Winter Quarter. Given biennially. Two hours lecture and drill each week. Prerequisite, six Quarters of German or equivalent. Mr. Fleischhauer.

The formation of German sounds. A systematic study of the standard of German pronunciation and its chief variations. Oral and written drill. For majors especially those who expect to teach the language.

701. Minor Problems. Two to ten credit hours. Autumn, Winter, and Spring Quarters. Open only on permission of the department. This course may be repeated for credit. Mr. Fleischhauer, Mr. Seidlin, Mr. Wonderley.

Investigation of minor problems in the various fields of German literature and philology.

***705. Introduction to the Study of Language.** Three credit hours. Spring Quarter. Three lectures each week.

The elements of linguistics with especial emphasis on semantics, together with an outline of the Indo-European family of languages.

***706. Elements of Semantics.** Three credit hours. Spring Quarter. Given biennially, alternating with German 705.

Studies in the history of verse and the development of their meaning.

710-711-712. Honors Courses. Three to five credit hours. Autumn, Winter, and Spring Quarters. A program of reading arranged for the undergraduate student who is a candidate for a degree with distinction in German with individual conferences and reports. Prerequisite, senior standing, with the record of "A" in at least half of the German courses and an average of "B" in the remainder, and the approval of the department.

† Not given during the academic year, 1956-1957.

* Not given in 1956-1957.

This course is intended to give undergraduates of special aptitude a greater opportunity to do independent study than is possible in the ordinary course.

Not open for graduate credit.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 690.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GREEK LANGUAGE AND LITERATURE

(See Classical Languages and Literature)

HISTORY

Office, 211 University Hall

PROFESSORS DULLES, HILL, DORN, McDONALD, ROSEBOOM, WEISENBURGER, SIMMS, RAGATZ, AND FISHER, ASSOCIATE PROFESSORS MORLEY, VARG, AND WALTERS, ASSISTANT PROFESSORS HARE, BREMNER, COLES, GOLDBERG, AND PEGUES, INSTRUCTORS AND ASSISTANTS

INTRODUCTORY COURSES

401-402. History of Western Civilization (1500 to the Present). Five credit hours each Quarter. Autumn, Winter, Spring. Lectures, discussion and required reading. All instructors.

401. The age of Renaissance; the Reformation; Spanish culture; Elizabethan England; French classicism, and early modern natural science, national monarchies, absolutism, and mercantilism; the Enlightenment; the French Revolution and Napoleon.

402. Restoration and reaction; democracy and economic and political radicalism; Romanticism; nationalism and imperialism; the World War; the peace settlement; post-war Europe.

History 401 and 402 provide a logical sequence, with 1815 the breaking point, but either may be taken independently as an elective.

403-404. History of the United States (1763 to the Present). Five credit hours each Quarter. Autumn, Winter, Spring. Lectures, discussion, and required reading. All instructors.

403. A study of the general political, constitutional, and economic development of the United States from the beginning of the Revolutionary era to the end of the Civil War.

404. A continuation of History 403. The two provide a logical sequence but either may be taken independently as an elective.

421-422-423. The Western World in Modern Times. Five credit hours each Quarter. Autumn, Winter, Spring. Lectures, discussion, and required reading. All instructors.

A course in the history of modern Europe and the United States. Emphasis is placed on the history of the United States in a world setting. Major themes include the development of representative government and democracy, the rise of capitalism, the role of organized religion, and the impact of scientific development.

421. From the beginning of modern times, through the first third of the nineteenth century. Absolutist and parliamentary institutions; revolutions and new governments in the United States and France; the reaction of the French Revolution in Europe and America.

422. The Nineteenth Century. Liberalism, materialism and the industrial revolution, national unification in the United States, Italy, and Germany; urban and agrarian discontent. Prerequisite, History 421 or permission of the director of the course.

423. The Twentieth Century. International rivalries and the two world wars; militarism and dictatorship, modification of economic and social systems. Prerequisite, History 422 or the permission of the director of the course.

Not open to those who have had History 401, 402, 403, or 404.

COURSES ON "500" LEVEL

Open to students from all colleges without prerequisite.

501. Social and Cultural History of Modern Europe. Five credit hours. Autumn Quarter. Mr. Goldberg.

The impact of the Industrial Revolution and the French Revolution on economic and political theory; the aesthetic protect of Romanticism and Realism; the Socialist attack on liberalism; the decline of reason and optimism in the arts; the ideological foundations of Fascism and Communism. Lectures, readings, and short research papers.

510. Great Figures in British History. Three credit hours. Winter Quarter. Mr. Roberts.

Lectures, textbooks, and required reading of six to ten biographies and relevant selections from prose and poetic literature. Certain salient developments of English history and traits of English life will be studied through the medium of biography.

511. Great Figures in Greek and Roman Antiquity. Three credit hours. Spring Quarter. Mr. McDonald.

A biographical approach to the study of Antiquity through an examination of the lives and times of eight prominent men (Solon, Pericles, Demosthenes, Alexander the Great, Hannibal, Cicero, Augustus, and Constantine). Readings in ancient and modern biographies.

512. Great Figures of Modern Europe. Three credit hours. Spring Quarter. Mr. Bamford.

A study of modern European history through an examination of the lives and time of great figures. Lectures, readings, and discussions.

513. Great Figures in American History. Three credit hours. One Quarter. Autumn, Winter, and Spring. Mr. Coles.

A study of the main trends of American development through the medium of biography. Lectures and discussions are devoted to historical background, comparison and contrast of leading figures, and analysis of motivation and character.

***517. The Middle Ages. Five credit hours. Spring Quarter.**

Roman civilization and its decline; early Christianity and the Barbarian invasions; Islam and Arabic culture; rise of the Papacy; Charlemagne and the Carolingian Empire; Otto I and the Holy Roman Empire; feudal society; the medieval Church; the Crusades; the rise of towns; the Renaissance; the rise of national states. Lectures, discussion, and required reading.

537. Recent History of the United States (1898-1928). Three credit hours. One Quarter. Autumn and Winter. Mr. Dulles, Mr. Walters.

The impact of modern industrialism upon American imperialism, society, government, and foreign policy. Laissez-faire and government regulation, the Progressive movement, the first World War.

538. Recent History of the United States (since 1928). Three credit hours. One Quarter. Winter and Spring. Mr. Dulles, Mr. Walters.

A continuation of History 537, but may be taken separately. Prosperity and depression, the New Deal, the United States in international affairs, the second World War.

590. Contemporary Europe (1920 to the Present). Three credit hours. Autumn Quarter. Mr. Dorn.

Beginning with the settlement of the Paris Peace Conference, this course aims at a study of the principal currents of European history since 1920, the failure of the international security organization, the dissolution of the European system under the impact of totalitarian movements, World War II, and Soviet imperialism since 1945.

COURSES ON "600" LEVEL

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For all courses in this group, the prerequisite is at least Junior standing and four Quarter courses in the social science field, of which at least two must be in history. Specific prerequisites are indicated in connection with specific courses.

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

***607. Early Modern Europe. Five credit hours. Winter Quarter. Mr. Pegues.**

* Not given in 1956-1957.

The development of Europe from 1800 to 1860. The Renaissance in both its Italian and northern phase. The church and the religious revolt. The rise of the national state and the beginnings of modern science. Lectures, readings, reports and discussions.

***611. Constitutional History of England (to 1485).** Three credit hours. Autumn Quarter. Prerequisite, History 682 or consent of the instructor but open without prerequisite to Juniors and Seniors preparing for law. Given in alternate years. Mr. Pegues.

The development of an effective royal administration, the rise of common law and a national system of courts, the dawn of representative institutions, the completion of basic institutions and the tradition of constitution by 1485. Lectures, textbooks, source problems and collateral readings.

***612. Constitutional History of England (since 1485).** Three credit hours. Winter Quarter. Prerequisite, History 611 or consent of instructor. Open to Juniors and Seniors preparing for law as in case of History 611. Given in alternate years. Staff.

The Tudor system, the struggle between king and parliament, cabinet government, electoral reform, and the law of the modern constitutions. Lectures, textbook, source problems, and collateral readings.

617. Europe, 1660-1789. Five credit hours. Winter Quarter. Staff.

This course offers a study of the transformation of feudal society into the modern absolute state in its social, economic and constitutional aspects, as exemplified in France, Spain, Austria, Prussia, and Russia. Special emphasis will be placed on France under Louis XIV, on the evolution of Prussia and Russia, the changing diplomatic alignments of the principal European Powers from 1660 to 1789, on the intellectual enlightenment of the Eighteenth Century and on Enlightened Despotism. Readings, discussions, and reports.

***619. Medieval Civilization.** Five credit hours. Autumn Quarter. Mr. Pegues.

The formation of feudal society; culture of castle and court; the rise of towns and their social and economic life; the evolution of the Medieval Church and its educational and artistic contributions. Lectures, readings, problems, and class discussions.

620. Europe, 1815-1871. Five credit hours. Autumn Quarter. Mr. Ragatz.

Nationalism, the democratic movement, economic growth, imperialism and cultural advance in the Old World from the Congress of Vienna to the close of the Franco-Prussian War.

621. The Expansion of Europe. Three credit hours. Autumn Quarter. Mr. Ragatz.

The Old Colonial Empires. The age of exploration and discovery and European colonizing activities in the Americas, Africa, and Asia to 1825.

622. The Expansion of Europe. Three credit hours. Winter Quarter. Mr. Ragatz.

Africa and the Western World in the 19th and 20th Centuries. Economic penetration, the conflict of cultures, political developments and social advance.

623. The Expansion of Europe. Three credit hours. Spring Quarter. Mr. Ragatz.

Asia, the Pacific Basin, and the Western World in the 19th and 20th Centuries. The quest for markets, the rise and decline of colonialism and contemporary problems in these critical areas.

624. The French Revolution and Napoleon. Five credit hours. Winter Quarter. Mr. Goldberg.

The economic, social, and ideological background of the Revolution; the social bases and political schisms of the first three Revolutionary governments, 1789-1795; the impact of international war; the program and role of Napoleon; Napoleon over Europe. Textbook, lectures, and research papers.

625. France since 1815. Three credit hours. Spring Quarter. Mr. Goldberg.

The social and economic evolution of France, 1815-1870; the founding of the Third Republic; the evolution of French politics and social classes, 1870-1914; the problems and crises of France between two wars; the Fourth Republic. Lectures, readings, and research papers.

* Not given in 1956-1957.

***626. The Rise of Islam and the Spread of Moslem Civilization.** Three credit hours. Autumn Quarter. Mr. Fisher.

A study of the Arab world at the time of Mohammed; his teachings and the spread of the Moslem faith, Ummayad and Abbasid Empires, the Crusades, Islamic culture and learning, and their decline under the Mongols and Turks. Terminal date, 1517.

627. The Rise and Fall of the Ottoman Empire. Three credit hours. Autumn Quarter. Mr. Fisher.

A study of the relationship between East and West from the Thirteenth Century to the close of the First World War.

628. The Middle East Since 1914. Three credit hours. Winter Quarter. Mr. Fisher.

A study of the conflicting national and international problems following the collapse of the Ottoman Empire, the development of the Turkish Republic, the enlarged Balkan states, the mandates, Zionism and Arab aspirations, World War II, the present USSR and USA interest in the area.

***629. Modern Germany (1789-1939.)** Three credit hours. Winter Quarter. Mr. Dorn.

Introductory lectures on the basic problems and tendencies of German history; Germany and the French Revolution; German Enlightenment and Romanticism and their relation to political thought; the Stein-Hardenberg reforms and the war of liberation; Prussia, Austria and the problem of German unity; the nationalist and democratic movements; the Bismarckian Empire; industrial development; William II and the First World War; the Treaty of Versailles; the Weimar Republic; and the National Socialist Regime. Lectures, readings, reports, and discussions.

630. The European State System (1871-1920). Three credit hours. Spring Quarter. Mr. Dorn.

An analysis of the evolution of the state system of Europe in the Classic period of national and imperialistic power politics. While economic and cultural forces common to the whole of Europe will be studied, emphasis will be on international relations from the Franco-Prussian War through the Paris Peace Conference of 1919. Lectures, readings, reports, and discussions.

631. Constitutional History of the United States (to 1876). Three credit hours. Winter Quarter. Prerequisite, History 403-404 or 421-422-423. Mr. Dulles.

Constitutional problems involved in the struggle for independence, establishment of the national government, the growth of democracy, the slavery controversy, and the Civil War. Lectures, readings and discussions.

632. Constitutional History of the United States (since 1876). Three credit hours. Spring Quarter. Prerequisite, History 631 or equivalent. Mr. Dulles.

Constitutional problems arising from the growth of capitalism, the organization of labor, territorial expansion, the First World War and New Deal reforms. Lectures, readings and discussions.

633. The Slavery Controversy in the United States. Three credit hours. Autumn Quarter. Mr. Simms.

The origins of the institution of slavery; the social system of the Old South; the psychological, economic, political and constitutional implications of the controversy; secession, and the appeal to arms and the impact of war upon life north and south. Lectures, readings, and discussions.

634. Reconstruction and the New South (1863 to the Present). Three credit hours. Winter Quarter. Mr. Simms.

The controversy over reconstruction plans; the triumph of the industrial order; the social and economic readjustments in the Southern States during and after reconstruction. Lectures, readings, and discussions.

635. American Foreign Policy to the Close of the Civil War. Three credit hours. Autumn Quarter. Mr. Hill.

The foreign relations of the United States, beginning with the diplomacy which resulted in the establishment of independence and including such subjects as the struggle for neutral rights

and commercial recognition, the extension of territory on the North American continent, the origin of the Monroe Doctrine, and the international controversies of the Civil War. Lectures, discussions, and reports.

636. American Foreign Policy Since the Civil War. Five credit hours. Winter Quarter. Mr. Hill.

Problems in the diplomacy of the United States resulting from the Civil War, the development of the Monroe Doctrine, the acquisition of dependencies, relations with Latin America and the Orient, arbitration, the Isthmian Canal, and the two World Wars. Lectures, discussions, and reports.

639. The Influence of Immigrant Groups upon United States History. Five credit hours. Spring Quarter. Mr. Weisenburger.

The share of different immigrant groups in the building of the nation, from the colonial period to the present, with special emphasis on the influence of immigration upon American political, economic, social, and cultural development. Lectures, reading, and discussions.

641. The Westward Movement Since 1783. Five credit hours. Winter Quarter. Mr. Roseboom.

This course is a continuation of History 644 but may be taken separately. It deals broadly with the westward spread of settlement since 1783, emphasizing such topics as land policies, transportation and trade, Indian relations, sectionalism, frontier social and intellectual life, and the effects of the westward movement on American development.

643. Political Parties in the United States. Five credit hours. Spring Quarter. Mr. Roseboom.

The radical party of the Revolution; the origin and growth of national parties; the slavery issue in party politics; the effect of the Civil War upon parties; party development in recent American history, special attention being devoted to the influence of the new economic and social conditions in creating new parties and policies.

644. The American Colonies and the American Revolution. Five credit hours. Autumn Quarter. Mr. Roseboom.

This course deals with the transplanting of European culture and institutions to North America, the resultant international rivalries, the westward spread of English settlement, and the cause and courses of the American Revolution in its political, social, economic, and military aspects. For a continuation of this course see History 641.

645. Latin America. Three credit hours. Autumn Quarter. Mr. Hill.

The European background; native cultures of the New World; conquest and settlement; political, social, and economic institutions; the wars for independence. This course affords a natural introduction to History 646. Lectures, readings, and discussions.

646. Latin America. Five credit hours. Winter Quarter. Mr. Hill.

The evolution of the A B C powers, with minor consideration of the other republics of South America; major problems of an Inter-American and an international nature. This course is a logical continuation of History 645. Lectures, readings, and discussions. For a continuation of this course see History 679.

***649. Greek Civilization. Three credit hours. Winter Quarter. Given in alternate years. Mr. McDonald.**

The Hellenistic Age: A study of Greek institutions from the accession of Alexander the Great to the period of the Roman conquest. Readings in the sources in translation.

***650. Roman Civilization. Three credit hours. Spring Quarter. Given in alternate years. Mr. McDonald.**

A study of the institutions of the Early Roman Empire, beginning with the Augustan Age, and ending with the death of Marcus Aurelius. Readings in the sources in translation.

653. The Ancient History of the Near East. Three credit hours. Spring Quarter. Given in alternate years. Mr. McDonald.

The ancient history of Egypt, Babylonia, Assyria, and adjacent cultures. Readings in the sources in translation.

655. Greek History. Five credit hours. Autumn Quarter. Mr. McDonald.

A history of Greece from the early Minoan period to the age of Demosthenes and Philip of Macedon. Readings in the Greek historians in translation.

* Not given in 1956-1957.

656. Roman History. Five credit hours. Winter Quarter. Mr. McDonald.

A history of Rome from the early Bronze Age to the fall of the Roman Republic. Readings in the Roman historians in translation.

668. The Emergence of Modern America, 1865-1898. Five credit hours. Spring Quarter. Mr. Weisenburger.

An intensive study of the political, social, and cultural transformation of the United States in the late Nineteenth Century.

676. History of Modern Russia. Five credit hours. Autumn Quarter. Mr. Morley.

This course is designed to acquaint the student with the major developments in modern and contemporary Russia. The early period down to the Nineteenth Century will be treated in broad outline. Emphasis will be given to the changes in Russia during the last century which laid the basis for the revolutions and the rise of the Soviet civilization.

677. Soviet Russia. Three credit hours. Spring Quarter. Mr. Morley.

This course continues the history of Russia from the March Revolution to the present time. It attempts the historical analysis of the March and November Revolutions, foreign intervention and civil war, the economic situation, the five year plans, foreign affairs and the present situation after the Second World War.

***678. Modern Poland. Three credit hours. Spring Quarter. Given in alternate years. Mr. Morley.**

Dealing primarily with the period since 1918, this course emphasizes those problems in Poland which were typical of the Succession States and analyzes Poland's transformations under the impact of Communism. Several background lectures are devoted to the partitions of Poland and to her struggle for independence during the Nineteenth Century.

679. Latin America. Five credit hours. Spring Quarter. Mr. Hill.

A study of the republics of Middle America, with major emphasis on Mexico. This course is a logical continuation of History 646 and 646. Lecture, readings, and discussions.

***682. History of England, Medieval Period (to 1485). Three credit hours. Autumn Quarter. Given in alternate years. Staff.**

History 682, 683, and 684 constitute an interdependent sequence in which the history of England and Greater Britain, socially considered, is rapidly surveyed from the earliest times to our own day. The aim of the course is to give a connected narrative, in terms of social, economic, and political conditioning, expressed in terms of historic personalities. Particularly, the necessary background for the student of English literature and of law will be furnished. The student will be introduced to a wide range of books, both historical and literary. Graduate students will be required to synthesize their readings into a written report.

683. History of England, Tudor and Stuart Periods (1485-1714). Three credit hours. Autumn Quarter. Prerequisite, History 682 or consent of instructor. Staff.**684. History of England, Hanoverian and Modern Period (1714-1900). Three credit hours. Winter Quarter. Prerequisite, History 683 or consent of instructor. Staff.****686. Contemporary England. Three credit hours. Spring Quarter. Mr. Poirer.**

Victorian England in its economic, political, and cultural phases transformed by imperialism, the two World Wars, and the rise of new class theory and organization. Lectures, reading, reports, informal discussions.

689. The History of Ohio. Three credit hours. Autumn Quarter. Mr. Weisenburger.

A general survey of state history—social, economic, religious, and political—from the Indian period to the present time.

692. Liberalism and Conservatism in Twentieth Century American History. Five credit hours. Spring Quarter. Mr. Bremner.

An historical interpretation of intellectual and cultural trends in the United States since 1900, emphasizing their interrelationship with social and political developments. Lectures, readings, reports, discussions.

* Not given in 1966-1967.

694. History of the Far East to 1800. Five credit hours. Autumn Quarter. Mr. Kawai.

The development of the civilization of China, Korea and Japan from the earliest times to the beginning of large-scale Western influence.

695. History of the Far East Since 1800. Five credit hours. Winter Quarter. Mr. Kawai.

The transformation of China, Korea and Japan in modern times under the impact of the West.

FOR SENIORS MAJORING IN HISTORY AND/OR GRADUATE STUDENTS

These are restricted offerings open only to the advanced students specified above.

700. Minor Problems in History. One to three credit hours. Autumn, Winter, and Spring Quarters. Open by permission of the instructor.

The course consists of individual study in some field of historical development and is designed to allow the student to work upon a problem in which he is particularly interested.

705-706-707. Honors Courses. Three to five credit hours. Autumn, Winter, and Spring Quarters. Informal conferences, the intent being to allow full scope to the initiative of the student. Prerequisite, senior standing and forty hours of credit in history, with a record of "A" in at least half the History courses and an average of "B" in the remainder. At least two Quarters required of candidates for the degree of Bachelor of Arts with Distinction in History. All professors.

A special topic is assigned to each student each Quarter, and results are tested by the requirement of theses and a special examination. Inability to obtain a grade of "B" in this course will be a disqualification for special honors.

Not open for graduate credit.

737. Recent History of the United States (1898-1928). Five credit hours. Autumn Quarter. Mr. Dulles.

The impact of modern industrialism upon American imperialism, society, government, and foreign policy. Laissez-faire and government regulation, the Progressive movement, the First World War.

Open only to graduate students and to seniors majoring in history. Lectures will be given concurrently with History 537 on Mondays, Wednesdays, and Fridays. Group meetings Tuesdays and Thursdays for special discussions and reports.

738. Recent History of the United States (since 1928). Five credit hours. Winter Quarter. Mr. Dulles.

A continuation of History 737, but may be taken separately. Prosperity and depression, the New Deal, the United States in international affairs and the Second World War.

Open only to graduate students and to Seniors majoring in history. Lectures will be given concurrently with History 538 on Mondays, Wednesdays, and Fridays. Group meetings Tuesdays and Thursday for special discussions and reports.

790. Contemporary Europe (1920 to the Present). Five credit hours. Autumn Quarter. Mr. Dorn.

While covering the same ground as History 590 this course aims at an advanced and intensive study and places its emphasis on methods of historical research and document analysis.

Open only to graduate students and to Seniors majoring in history. Lectures will be given concurrently with History 590 on Mondays, Wednesdays, and Fridays. Group meetings Tuesdays and Thursdays for special discussion and reports.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 678.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department, and for requirements for advanced degrees, see the Bulletin of the Graduate School.

HISTORY OF EDUCATION

(See Education)

HOME ECONOMICS

Office, 220 Campbell Hall

PROFESSORS SCOTT, DIRKS, GILMORE, HEYE, LEHMAN, MCGINNIS, NEWARK, PATTON, ASSOCIATE PROFESSORS BANCROFT, BEARD, GREEN, HILLMAN, HOEFLIN, KENNEDY, LEWIS, PRUDENT, TURNBULL, WEAVER, AND WOOD, ASSISTANT PROFESSORS ALBANESE, ALEXANDER, BECKWITH, BLOOM, FISCHER, HARGER, IRVINE, KYLE, LLOYD, MCENIRY, MESSIER, MOORE, RYAN, SMITH, TAPSCOTT, TURNER, WARFIELD, WERTENBERGER, AND MISS COLVER, MRS. DESKINS, MRS. MARTIN, MISS MILLICAN, MISS NORMAN, MRS. TREECE, AND ASSISTANTS

(For Curriculum in Home Economics see page 75)

401. Textiles. Three credit hours. One Quarter. Autumn, Winter, Spring. Two hours for discussion and one two-hour laboratory period each week. A course for students not majoring in Home Economics. Credit will not be given for both Home Economics 401 and Home Economics 505. Miss Turnbull, Miss Tapscott.

A study which deals with fibers, yarns, fabrics, construction, and finishes fundamental in the purchase and use of textile fabrics.

405. Elements of Family Living. Three credit hours. One Quarter. Autumn, Winter and Spring. Three class meetings each week. Miss Heye, Miss Hoeftin, Mrs. Moore, Miss McGinnis.

This course is designed to challenge the student with the problems inherent in present-day home life, and to arouse interest in further study and experiences concerned with meeting such problems. Basic needs of the family are introduced. The contribution of home economics to family well-being is emphasized.

430. Introduction to Clothing and Textiles. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Home Economics 405 and Fine Arts 430 or 431 are recommended as preceding or concurrent courses. Mrs. Graham, Miss Turnbull.

This course is planned to assist the student in analyzing personal and family resources and needs in relation to clothing. It aims to develop standards in the selection, purchase, use, and maintenance of the wardrobe.

Not open to students who have credit for Home Economics 508.

431. Clothing: Principles of Construction. Five credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour class meetings and three two-hour laboratory periods each week. Prerequisite, Home Economics 430. Miss Gilmore, Mrs. Graham, Mrs. Treece.

The purpose of this course is to develop some understanding of the principles underlying the use of patterns, and the construction and fitting of garments. Experience in applying these principles is provided.

440. Introduction to Nutrition and Foods. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Home Economics 405 is recommended as a concurrent or preceding course. Mrs. Deskin, Miss Green, Mrs. Messier, Mrs. Prudent, Mrs. Wertenberger.

This course is designed to assist the student in developing food selection habits which meet nutritional standards. The social significance of food and standards for food selection will be emphasized from the standpoint of meeting needs at various economic levels.

Not open to students who have credit for Home Economics 410.

441. Foods: Principles of Preparation. Five credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour class meetings and three two-hour laboratory periods each week. Prerequisite, Home Economics 440. Miss Green, Mrs. Wertenberger.

The function of this course is to develop some understanding of basic principles of food preparation and preservation and some ability to apply these principles as they relate to commonly used foods in an adequately balanced diet.

450. The House. Three credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour class meetings each week. Miss Lloyd, Mrs. Moore, Miss Newark.

A study of present-day housing from the standpoint of health, safety, economy, convenience, aesthetic qualities, and other values of concern to the family.

503. Clothing. Five credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour class meetings and three two-hour laboratory periods each week. Prerequisite, Fine Arts 437 and Home Economics 431. Miss Gilmore, Miss Ryan.

The function of this course is to develop skill in methods of fitting and provide opportunity for designing. Laboratory work includes flat pattern designing and draping, and the application of those principles to clothing design and construction.

505. Textiles. Three credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Home Economics 430. Miss Turnbull.

A study of the characteristics of textile products and the extent to which fiber and processing determine these characteristics. Some study of labeling of textiles and textile testing by simple tests.

Not open to students who have credit for Home Economics 401.

506. Household Equipment. Five credit hours. One Quarter. Autumn and Spring. Three one-hour class meetings and two two-hour laboratory periods each week. Miss Beard, Miss Bloom.

A study of the principles involved in the selection, construction, operation, and care of household equipment and its relation to the well-being of the family.

507. Needle Crafts. Two credit hours. Winter Quarter. Two two-hour laboratory periods each week. For Occupational Therapy majors. Open to others with consent of the instructor. Miss Gilmore, Mrs. Graham.

Application of principles of design. Opportunity to work in a variety of needle crafts.

512. Home Furnishing. Five credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour class meetings and two two-hour laboratory periods each week. Prerequisite, Fine Arts 430 or 431, Home Economics 430, 401 or consent of the instructor. Engineering Drawing 538, Home Economics 450 or 505 are recommended as preceding or concurrent. Miss Warfield.

A study of the application of the principles of art to home furnishing with a consideration of economic and social factors affecting choice.

***513. Furnishing the Home.** Three credit hours. Spring Quarter. Two one-hour class meetings and one two-hour laboratory period each week. A course planned primarily for non-majors in home economics. Credit will not be given for both Home Economics 512 and Home Economics 513. Miss Warfield.

A study of problems in furnishing the home. Emphasis is placed on consideration of needs and available resources of the family and the importance of intelligent planning in the selection, combination, and the use of furnishings.

514. Clothing: Elementary Construction. Three credit hours. Autumn Quarter. Three two-hour laboratory periods each week. Planned for students majoring in Occupational Therapy. Not open to students in Home Economics. Mrs. Graham.

This course deals with problems of elementary garment construction.

515. Clothing: Children's Clothing. Three credit hours. Winter Quarter. One one-hour class meeting and two two-hour laboratory periods each week. Prerequisite, Home Economics 561 or consent of the instructor; Home Economics 431 is recommended as a preceding course. Miss Gilmore, Miss Ryan.

The selection, design and construction of children's clothing in relation to the developmental needs of children. Meeting children's needs with due consideration of the management of time, energy and income.

* Not given in 1956-1957.

518. Elements of Homemaking. Three credit hours. Spring Quarter. Three class meetings each week. A course planned for non-majors in home economics. Elective to Juniors and Seniors. This course is of equal interest to men and women. Miss Lloyd.

A non-technical course in which the principles of home management are introduced and the use of the resources of the family is studied in their relation to family well-being.

Not open to students who have credit for Home Economics 560.

541. Principles and Methods of Teaching Applied to Home Economics. Five credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour and one two-hour class meetings each week. Prerequisite, twenty-five Quarter-credit hours in home economics courses and Education 533. Miss Bancroft.

Consideration of curriculum, methods of teaching, management, and other problems of the home economics teacher.

No student may register for the course until she is fully admitted to the Teaching Curriculum by the Faculty Adviser.

543. School-Community Problems of the Home Economics Teacher. Three credit hours. One Quarter. Winter and Spring. Three class meetings each week. Hours for observation and participation to be arranged. Students preparing to teach vocational home economics in secondary schools should schedule this course. Prerequisite, Home Economics 541. Miss Irvine.

Consideration of the responsibilities and activities of the home economics teacher in the extended school program. Such topics as the following are included: techniques for leadership in adult education programs, methods for promoting and vitalizing home and work experience; and suggestions for guiding home economics club work.

550. Foods: Meal Management. Three credit hours. One Quarter. Autumn, Winter, Spring. One one-hour class meeting and two three-hour laboratory periods each week. Prerequisite, Home Economics 441. Mrs. Wertenberger.

The function of this course is to assist the student in developing some ability in planning, preparing and serving palatable, nutritious and attractive meals for families at various economic levels. The use and care of equipment and table appointments will be included.

551. Nutrition: Family. Three credit hours. One Quarter. Winter and Spring. Two one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Home Economics 441 or the equivalent. Mrs. Messier.

A study of some fundamental principles of human nutrition and their application to the feeding of adults and children in typical families.

552. Nutrition: Recent Developments. Three credit hours. Autumn Quarter. Three one-hour class meetings each week. Prerequisite, Home Economics 410 or the equivalent and two hours of biological science. Required of students enrolled in the nursing education curriculum.

559. Household Buying. Five credit hours. One Quarter. Autumn, Winter, Spring. Four one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Economics 402 or 406 and thirty Quarter credit hours in Home Economics. Mrs. Moore, Miss Newark.

A study of the market from the family point of view. Application of some basic principles of selection and buying to specific problems related to the purchase of food, textiles, furnishings, and equipment for the household. Field trips are arranged, including one over-night trip to visit a large wholesale food market.

560. Home Management. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 402 or 406 and twenty Quarter-credit hours in home economics courses.

A study of the management of the various resources available to the family with a view to promoting family well-being and satisfaction.

Not open to students who have credit for Home Economics 518.

561. Introduction to Child Development. Three credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour class meetings each week and two morning hours each week for nursery school observation to be arranged. Prerequisite, Psychology 401. A preceding course in nutrition is recommended. Miss Heye, Miss Hoeflin, Miss McGinnis.

This course considers methods of meeting the fundamental needs of children at all levels of development, and attempts to acquaint the student with the outstanding characteristics of development.

570. Introduction to Institution Food Management and Service. Three credit hours. Spring Quarter. Two three-hour laboratory periods and one hour to be arranged each week. Prerequisite, Home Economics 441. Miss Harger.

This course is planned to introduce students in the field of institution management, and to provide experience in preparing and serving food in quantity. Time will be given to discussion of equipment, organization and management of small lunchrooms, including school lunchrooms.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Clothing. Three credit hours. One Quarter. Autumn, Winter, and Spring. Two three-hour laboratory periods each week. Prerequisite, Home Economics 503. Miss Gilmore, Miss Ryan.

This course includes the application of the principles of tailoring. The laboratory work consists of the making of a suit or coat.

***604. Clothing.** Three credit hours. Spring Quarter. Three two-hour laboratory periods each week. Prerequisite, Home Economics 503 or the consent of the instructor. Miss Gilmore, Miss Ryan.

The function of this course is to provide opportunity for creative work in draping. The laboratory work includes handling a variety of fabrics, using historical and contemporary design sources and experimenting with finishing techniques for different fabrics and different designs.

610. Nutrition. Three credit hours. Winter Quarter. Three one-hour class meetings each week. Prerequisite, Home Economics 440, Physiology 440, Physiology 422 or 507 and Agricultural Biochemistry 506 or 601. Mrs. Messier.

A consideration of recent human nutrition studies as they relate to modern concepts of nutrition.

612. Nutrition: Diet Therapy. Five credit hours. Spring Quarter. Three two-hour class meetings each week, other hours to be arranged. Prerequisite, Home Economics 610. Mrs. Prudent.

Study of modern concepts of clinical nutrition in connection with abnormal conditions in which diet is an important part of the treatment.

615. Experimental Work in Food Preparation. Five credit hours. One Quarter. Autumn and Spring. Two one-hour class meetings and three three-hour laboratory periods each week. Prerequisite, Home Economics 441 and Agricultural Biochemistry 411. Miss Green.

The application of experimental methods to problems involved in the preparation of foods.

†617. Foods: Preservation in the Home. Three credit hours. Alternate Summers. One one-hour class meeting and two two-hour laboratory periods each week. Prerequisite, Bacteriology 509 and fifteen hours of food and nutrition. Mrs. Prudent.

This course covers the theory and practice of home methods of food preservation including dehydrating, brining, and pickling as well as canning and freezing.

619. Household Equipment. Three credit hours. Autumn Quarter. Two one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Home Economics 506. Home Economics 512 is recommended as a concurrent or preceding course. Miss Beard.

Application to home situations of the recent developments in lighting, with special emphasis on selection, care, and use of home lighting equipment.

622. Household Equipment: Performance Testing. Five credit hours. Winter Quarter. Two one-hour class meetings and three two-hour laboratory

† Not given during the academic year, 1956-1957.

* Not given in 1956-1957.

periods each week. Prerequisite, Home Economics 506, fifteen Quarter-credit hours in natural science and twenty additional Quarter-hours in home economics. Miss Bloom.

Experimental problems on the performance of the major types of household equipment used in preparation of food.

627. Laboratory in Home Management. Five credit hours. One Quarter. Autumn, Winter, Spring. Five hours of group conferences and scheduled laboratory each week, and other laboratory hours to be arranged. Each student electing the course should report to Room 211, Campbell Hall, to make application and to check for eligibility, at least two Quarters in advance. Limited facilities prevent opening this course to out-of-state students not regularly enrolled for an undergraduate degree. Prerequisite, Home Economics 506 or 450, 550, and 561. Prerequisite or concurrent, Home Economics 560. Home Economics 512, 559, and 663 are recommended as preceding courses. Miss Lloyd, Miss Newark.

An application of the principles presented in other courses. Each student is provided with an opportunity to study the management of one or more homes, the needs of the student being considered.

***628. Selection of Furnishings for the Home.** Three credit hours. Winter Quarter. Two one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Economics 402 or 406 and Home Economics 512. Miss Warfield.

A study of the consumers' problems in the selection of home furnishings. Field trips are arranged.

635. Recent Developments in Food and Nutrition Research. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Agricultural Biochemistry 411, Home Economics 551 or the equivalent. Mrs. Prudent.

This course considers the recent important contribution of research relative to food and nutrition.

661. Child Development. Three credit hours. One Quarter. Autumn, Winter, Spring. Two class meetings each week and four morning hours to be arranged. Each student electing the course must report to Room 220, Campbell Hall, to make application and to arrange for nursery school laboratory. Prerequisite, Home Economics 561 and fifteen Quarter-credit hours of social science. Students not majoring in home economics may, with the consent of the instructor, substitute other courses related to the study of young children and family relations. Miss Hoefflin, Miss Grammen.

Application of the principles of child development to actual work with pre-school children. Appropriate guidance technique will be discussed and applied.

670. Clothing: Fashion. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, ten Quarter-credit hours in Fine Arts and Home Economics (Textiles and Clothing) and ten Quarter-credit hours in economics, sociology, or history. Miss Gilmore.

A study of the origin and development of the fashion movement and its relation to the manufacturing and consumption of textiles and clothing. An analysis of sources of current fashion information; of methods and practices used in style coordination; of fashion trends and their effect on the markets and the consumer.

***671. Textiles.** Three credit hours. Winter Quarter. One one-hour class meeting and two two-hour laboratory periods each week. Prerequisite, ten Quarter-credit hours in home economics, including Home Economics 401 or 505 and ten Quarter-credit hours of natural science. Miss Tapscott.

In this course the student will gain experience in planning and conducting textile tests and in evaluating the resulting data. Fibers, yarns, fabrics, and finishing agents will be studied in relation to probable durability and serviceability. Some consideration will be given to the development, present status, and importance of textile testing.

* Not given in 1956-1957.

672. Textiles: Historic. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Home Economics 401 or 505, one course in Fine Arts, and ten Quarter-credit hours in social science. Miss Ryan.

The development of textiles from the prehistoric to the modern age. Correlation of design, production and use. Contemporary cultural forces in relation to the evolution of textiles.

701. Special Problems in Home Economics. One to five credit hours. Autumn, Winter, and Spring Quarters. One conference or more each week. Prerequisite, graduate standing or senior standing with an accumulative point hour average of 2.7 or above and consent of the instructor. Students must have at least six Quarter credit hours in the area of home economics in which the problem is to be taken. For graduate students, problems must be in major or minor fields. The staff.

Problems in various phases of home economics chosen for individual study.

- (a) Problems in food preparation.
- (b) Problems in nutrition and dietetics.
- (c) Problems in textiles.
- (d) Problems in clothing.
- (e) Problems in home furnishing.
- (f) Problems in household equipment.
- (g) Problems in home management.
- (h) Problems in institution management, equipment, and food buying.
- (i) Problems in teaching home economics.
- (j) Problems in child and family development.
- (k) Problems in hospital dietetic administration and therapeutics.

740. Home Economics in American Education. Two credit hours. Autumn Quarter. Two class meetings each week. Prerequisite, Home Economics 541 or equivalent, teaching experience in home economics and consent of the instructor. Miss Scott.

An overview of the field of home economics in American education at the elementary, secondary, higher education and adult levels. General trends in enrollment, curriculum and guidance, supervision, administration and research as background for advanced work in home economics education.

***741. The Teaching of Home Economics.** Three credit hours. Winter Quarter. Prerequisite, Home Economics 740 and consent of instructor.

The influence of the newer movements in secondary education on home economics. The place of home economics in the experimental secondary school programs and in such developments as integrated and unified educational offerings, core courses, and special home economics courses from a functional point of view.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department, see the Bulletin of the Graduate School.

HYGIENE

(See Physical Education)

INDUSTRIAL ARTS

(See Industrial Engineering)

INDUSTRIAL ARTS EDUCATION

(See Education)

* Not given in 1956-1957.

INDUSTRIAL ENGINEERING

Office, 125 Industrial Engineering Building

PROFESSORS LEHOCZKY AND EDMONDSON, ASSOCIATE PROFESSORS MOORE
AND MITTEN, INSTRUCTORS AND ASSISTANTS

‡404. Foundry Practice. Three credit hours. Autumn Quarter. Six hours of lecture and laboratory work each week. Prerequisite, second year standing in the College of Education or written permission from the chairman of the Department of Industrial Engineering.

A course designed primarily for students who expect to enter the Industrial Arts teaching field. Special consideration will be given to molding and casting of brass, bronze, aluminum, magnesium, copper, and light gray iron castings. Laboratory practice in bench, floor and machine molding; plaster molding, non-ferrous furnace and cupola operation; core making. Foundry materials; sands, clays, facings, fluxes, and core binders.

Not open to students in the College of Engineering.

Not open to students who have credit for Industrial Engineering 405.

‡420. Machine Shop Practice. Five credit hours. Autumn Quarter. Ten hours of lecture or laboratory work each week. Industrial Arts Education, third year. Prerequisite, second year standing in the College of Education including a course in Engineering Drawing or written permission from the chairman of the Department of Industrial Engineering. Mr. Moore and others.

Laboratory practice on the basic machine tools such as the lathe, planer, shaper, and so forth. The course is designed to enable the student to acquire skills, information and procedures necessary for the teaching of the subject at a secondary school level.

Not open to students in the College of Engineering.

Not open to students who have credit for Industrial Engineering 419.

For additional courses in Industrial Engineering, see the Bulletin of the College of Engineering.

INTERNATIONAL STUDIES

Office, 100 University Hall

SUPERVISORY COMMITTEE: PROFESSORS GRIFFIN AND SMITH, ASSOCIATE PROFESSORS NEMZER, RANDALL, FISHER, AND BENNETT, AND ASSISTANT PROFESSOR MEIDEN

410. Basic Issues in World Affairs. Two credit hours. One Quarter. Autumn and Winter. Two one-hour class meetings each week. No prerequisite. Classes will be led by members of the social science and humanities departments. Mr. Nemzer, Supervisor.

Lectures, discussions, and collateral readings. This course is designed as an introduction to International Affairs and is open to any student. The course is intended to serve two groups: students interested in the International Studies curriculum, and any student interested in International Affairs.

ITALIAN

(See Romance Languages and Literatures)

JOURNALISM

Office, 203 Journalism Building

PROFESSOR POLLARD, ASSOCIATE PROFESSORS GETZLOE, WAGNER, AND MAGUIRE,
INSTRUCTORS AND LECTURERS

401. Introduction to Journalism. Two credit hours. One Quarter. Autumn, Winter, Spring. Not open to Freshmen. Required of all journalism majors. All Instructors.

‡ This course requires the use of a pair of safety glasses. In the event that the student must have prescription lenses, he shall obtain his safety glasses during the Quarter preceding their first use. This may be done through the Optometry Clinic, Room 15, Optometry Building, or through any registered optometrist.

An introduction to journalism, particularly the modern newspaper. The functions of the newspaper and allied fields: radio, magazines, public relations, advertising. Study of outstanding and representative newspapers. Readings and written reports.

402. Elementary Reporting. Four credit hours. One Quarter. Autumn, Winter, Spring. Two class hours and one two-hour laboratory period, plus one laboratory period on the *Lantern* each week. Prerequisite, Journalism 401. All Instructors.

An introduction to the study of and practice in the gathering and writing of news. Students report all types of campus news, including meetings and speeches. News stories in contemporary newspapers are read, discussed, and analyzed.

403. Advanced Reporting. Five credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and two laboratory periods each week. Prerequisite, Journalism 402. All Instructors.

A continuation of Journalism 402. Interviews and special newspaper features. Emphasis on the work of the beat or departmental reporter and on the reporting of specific types of news.

Not open to students who have credit for Journalism 402 prior to October 1, 1946.

501. Copyreading. Four credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and one laboratory period each week on the *Lantern*. Prerequisite, Journalism 403. Mr. Maguire.

Editing of copy, headline writing, rewriting, and general desk work.

508. Technical News Writing. Three credit hours. One Quarter. Autumn, Winter, Spring. Open to Juniors and Seniors only. A special section of this for non-journalism radio majors is offered in the Autumn Quarter only. Mr. O'Brien, Mr. Wagner.

A non-professional course in journalistic writing, designed especially for agricultural, technical, professional, and radio students. Presuming no prior journalism experience for the student, it gives a brief survey of the field with elementary training in the gathering and writing of news and the writing of news-feature articles for trade and class publications. Emphasis is given to news in the agricultural, technical, professional, industrial, and business fields.

Not open to students who have credit for Journalism 403, or equivalent, or 602.

517. History of U. S. Journalism. Three credit hours. Spring Quarter. Three recitations each week. Mr. Pollard.

Origin and growth of journalism in the United States, with consideration of its English beginnings. Notable editors and publishers and mutual influence of the press and democracy.

519. Newspaper Typography and Printing. Four credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and two laboratory periods each week. Permission of the instructor necessary. Mr. Dove.

History of printing, with special application to the newspaper. Study of type faces commonly used in newspaper and advertising typography. Newspaper and other makeup. Survey of typesetting machinery, illustration processes, newspaper presses and allied equipment, paper and ink. Printing problems.

525. The Weekly Newspaper. Three credit hours. Winter Quarter. Three recitations each week. Mr. Dove.

A study of the special place and functions of the weekly newspaper, partly through examination of the weekly newspapers themselves. The proper relation of the weekly newspaper and the community.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

602. Magazine Writing. Four credit hours. One Quarter. Autumn and Spring. Three lectures and recitation periods and one laboratory period each week. Prerequisite, permission of the instructor. Mr. Getzloe.

Instruction in and writing of articles for magazines of general circulation and for trade, class, and technical journals.

617. Public Relations. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, for other students, senior standing in Journalism or permission of the instructor. Mr. Maguire.

Study of public relations problems, policies and practices of welfare and professional organizations, educational and other institutions, industry, commerce and government agencies. A study of the manner in which these organizations make their activities known and how they can most effectively use the media of publicity, the press especially. Organizing of publicity projects and campaigns and their effect on public opinion and action.

621. The Editorial Page. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Prerequisite, permission of the instructor. Mr. Getzloe, Mr. Pollard.

Study of the purpose, form, style, and spirit of the editorial. Consideration of current events, practice in news interpretation and other editorial writing, and study of editorial pages.

622. Mass Media and Contemporary Affairs. Three credit hours. One Quarter. Autumn and Winter. Three recitations each week. Prerequisite, senior standing and permission of the instructor. Mr. Wagner.

The function of newspapers, radio, television, and magazines as media of mass communication in the social system. The nature of these media as public opinion and propaganda instruments. Discussion and interpretation of current events.

LATIN LANGUAGE AND LITERATURE

(See Classical Languages and Literature)

MANUAL ARTS

(See Education)

MATHEMATICS

Office, 306 University Hall

UNIVERSITY RESEARCH PROFESSOR RADO, PROFESSORS HELSEL, HALL, MANN, REICHELDERFER, AND MICKLE, ASSOCIATE PROFESSORS ALDEN, WHITNEY, RYSER, PEPPER, AND MILLER, ASSISTANT PROFESSORS JONES, KLEINFELD, ZIEBUR, DESKINS, FISHER, REEVES, AUSTIN, AND DAVIS, INSTRUCTORS, ASSISTANT INSTRUCTORS, AND GRADUATE ASSISTANTS

I. Students planning to teach mathematics in secondary schools and junior colleges are advised to take Mathematics 416-417-418, 536-537, 545, 621, 631, 651-652.

II. Students who intend to major in mathematics should complete Mathematics 416-417-418 and 536-537-538 during their first six quarters of residence in the University, and then consult with members of the Mathematics Department with reference to courses for the third and fourth years.

III. Students in the College of Engineering (except those in Architecture) are required to take Mathematics 421, 422, 440-541-542-543. Other courses in the Department of Mathematics are open as electives to students in the College of Engineering.

IV. Students wishing to specialize in statistics or actuarial mathematics should arrange to take Mathematics 601, 672-673, 611, 641, 692. Supplementary courses might be chosen from Mathematics 607, 731, 733.

PROFICIENCY EXAMINATIONS

In order to insure that students may not enter courses for which they are insufficiently prepared or courses in which they are already proficient, placement and proficiency examinations are held at the beginning of each Quarter. To enroll in Mathematics 421 a student must have at least one year of high school algebra and one year of high school geometry. Students enrolled in Mathematics 421 will take a placement examination at the end of the first week of the Quarter. The examination will cover the content of the one unit of high school algebra which is known at Ohio State as Mathematics 401. Those students who do not receive a passing grade in the placement examination will be transferred from 421 to 401. Proficiency examinations in Mathematics 416, 417, 418, 421, 422, 440, 536, 537, 538, 541, 542, 543 will be given at 8 A.M. on the first Saturday of each Quarter in the Office of the Department of Mathematics. To pass a proficiency examination in any one of the courses 416, 417, 418, 421, 422, 440, 536, 537, 538, 541, 542, 543, a grade of A or B is necessary and either of these grades carries with it an Em credit of five hours provided this does not raise the total Em credit of the student above thirty credit hours.

REVIEW COURSES

Mathematics 400, 401, 404, and 406 are review courses covering essential aspects of high school mathematics. Students must pay an additional fee for each of these courses taken and the credit hours of such courses are added to graduation requirements.

All entering students must take the O.S.U. Mathematical Test given during Orientation Week. This test covers arithmetic and high school algebra. A person who wishes to enroll in Mathematics 416 or Mathematics 421 must pass the algebra portion of the examination; otherwise he will be placed in a review course, either Mathematics 401 or Mathematics 400 depending on his test score.

One part of the O.S.U. Mathematics Test covers the material of Mathematics 400, Arithmetic and Elementary Algebra. In general, any student who fails this part of the examination will be required to take Mathematics 400 even though he may not plan to take any college level mathematics courses.

400. Arithmetic and Elementary Algebra. Five credit hours. Five credit hours will be added to graduation requirements of any student taking this course. One Quarter. Autumn, Winter, Spring. An additional fee will be charged. All instructors.

This course consists of a review of arithmetic combined with topics from elementary algebra and geometry.

401. Intermediate Algebra. Five credit hours. Five credit hours will be added to graduation requirements of any student taking this course. One Quarter. Autumn, Winter, Spring. An additional fee will be charged. Prerequisite, Mathematics 400 or the equivalent as measured by an examination. All instructors.

This is a review of topics covered in one and a half units of high school algebra.

404. Plane Geometry. Five credit hours. Five hours will be added to the degree program of any student taking this course. One Quarter. Autumn and Winter. An additional fee will be charged. All instructors.

406. Solid Geometry. Three credit hours. Three hours will be added to the degree program of any student taking this course. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Mathematics 404 or the equivalent. An additional fee will be charged. All instructors.

416. First Year College Mathematics. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, a satisfactory grade in the pre-college mathematics test, or Mathematics 409, or Mathematics 401. All instructors.

The sequence 416, 417, 418 emphasizes the fundamental concepts and cultural aspects of mathematics. It is designed to prepare students for admission to courses in calculus. Mathematics 416 deals with the development of algebra and geometry from their basic concepts.

Not open to students who have credit for Mathematics 421.

417. First Year College Mathematics. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 416. All instructors.

A continuation of Mathematics 416. This course presents the unification of algebra and geometry attained by means of analytic geometry. The meaning of a function is considered and trigonometric functions are discussed in detail.

Not open to students who have credit for Mathematics 422.

418. First Year College Mathematics. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 417. All instructors.

A continuation of Mathematics 417. The limit concept is introduced with simple examples from elementary calculus. Statistical functions and the elementary procedures of statistics are studied. Selected topics from modern mathematics are also presented.

Not open to students who have credit for Mathematics 423 or 440.

421. College Algebra. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, one year of high school algebra and a passing score in the pre-college mathematics test, or Mathematics 401. All instructors.

Exponents and radicals, graphs, theory of quadratic equations, determinants of third and fourth orders, ratio, proportion, variation, logarithms, arithmetic progressions, geometric progressions, compound interest and annuities, permutations, combinations, binomial theorems, probability, partial fractions, inequalities.

Not open to students who have credit for Mathematics 416.

422. Trigonometry. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 421 or the permission of the department. All instructors.

Trigonometric functions and their graphs, functions of sum and difference of angles, equations and identities, formulas for solution of triangles, calculations using logarithmic tables. Complex numbers and their representation in a plane. DeMoivre's theorem. Elements of spherical trigonometry.

Not open to students who have credit for Mathematics 417.

429. Mathematics of Finance. Five credit hours. Winter Quarter. Prerequisite, Mathematics 421 or 416 or permission of the instructor.

The principles of interest and discount with applications to annuities, sinking funds, capitalization, depreciation, valuation of bonds, building and loan associations.

435. Elementary Mathematical Statistics. Five credit hours. Spring Quarter. Prerequisite, Mathematics 421 or 416 or permission of the instructor.

Methods of testing hypotheses and estimation, chi-square test, t test, analysis of variance test. Estimation of mean, variance, correlation, and partial correlation coefficients; methods of sampling.

440. Calculus for Engineers. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 422 or 417, or permission of the department. All instructors.

Limits, derivatives and differentials, integration and summation.

536. Calculus. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 418.

The sequence 536, 537, 538 emphasizes the fundamental principles and methods of calculus. Although many applications are included, the main purpose of the sequence is to develop the calculus in a rigorous manner starting from specific hypotheses. Mathematics 536 deals with the concept of function, limit, and derivatives.

537. Calculus. Five credit hours. One Quarter. Winter and Spring. Prerequisite, Mathematics 536.

A continuation of Mathematics 536. This course has the definite integral and the antiderivative as central ideas.

538. Calculus. Five credit hours. One Quarter. Autumn and Spring. Prerequisite, Mathematics 537.

A continuation of Mathematics 537. Differentiation and integration of functions of several variables.

541. Calculus for Engineers. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 440. All instructors.

A continuation of Mathematics 440. The topics presented include conic sections, trigonometric functions, exponential and logarithmic functions, parametric equations, and polar coordinates.

542. Calculus for Engineers. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 541. All instructors.

A continuation of Mathematics 541. Integration of elementary forms by various devices, applications of integration including first and second moments.

543. Calculus for Engineers. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 542. All instructors.

A continuation of Mathematics 542. Infinite series, space coordinates, partial derivatives, multiple integrals.

545. Applications of Mathematics. Five credit hours. Winter Quarter. Prerequisite, Mathematics 536 or 541. Mr. Fisher.

The aim of this course is to provide prospective teachers of mathematics a wide acquaintance with the diverse applications of mathematics. Selected applications in the following areas will be discussed: Astronomy, Agriculture, Biological Sciences, Business, Industry, Navigation, Physics, Social Sciences, Statistics, Surveying.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Advanced Calculus. Five credit hours. One Quarter. Autumn and Winter. Prerequisite, Mathematics 543 or 538.

The theory of limits, functions, continuity; definition and meaning of ordinary and partial derivatives; definition of definite integrals, proper and improper; fundamental theorem of the integral calculus; functions defined as integrals containing a parameter; mean value theorems; convergence of series; power series; implicit functions.

611. Differential Equations. Five credit hours. One Quarter. Autumn and Winter. Prerequisite, Mathematics 543 or 538.

Equations of first and second orders; linear equations with constant coefficients; solutions in series; numerical approximations; the existence theorem of Picard; systems of ordinary equations; the Legendre and Bessel equations with certain applications.

621. Advanced Geometry. Five credit hours. Autumn Quarter. Prerequisite, Mathematics 542 or 537 or 536 and ten credit hours of physical sciences. Mr. Miller.

This course is designed primarily for students in the College of Education. Emphasis is placed on clarity of expression and logical structure. Topics are selected from the following list: points, lines, and circles connected with a triangle, concurrency and collinearity, vector geometry, mean centers, harmonic properties, quadrilaterals, orthogonal circles, inversion, poles and polars, coaxial circles, orthogonal and conical projections, basic ideas of non-Euclidean geometry.

***623. Projective Geometry.** Five credit hours. Spring Quarter. Prerequisite, Mathematics 537 or 542.

This is a course in synthetic projective geometry which includes such topics as: axioms, duality, double ratio, projective and metric properties of conics, pole and polar, involutions, and collineations.

***625. Solid Analytical Geometry.** Five credit hours. Autumn Quarter. Prerequisite, Mathematics 537 or 542. Mr. Miller.

The topics studied in this course include: elementary theory of determinants and matrices, systems of linear equations, equations of curves and surfaces, transformation of coordinates, and classification of quadric surfaces.

631. History of Mathematics. Four credit hours. Spring Quarter. Prerequisite, Mathematics 536 or permission of the instructor. Mr. Lazar.

This course is designed primarily for students interested in the origin and growth of mathematical ideas. Its purpose is to trace the development of elementary mathematics from its primitive origins to its present form. The topics studied include the development of arithmetic, algebra, geometry, trigonometry, and calculus.

641. Theory of Equations. Five credit hours. Autumn Quarter. Prerequisite, Mathematics 542 and 537. Mr. Mann.

Properties of polynomials and roots of polynomials number fields, selected topics from modern algebra.

651-652. Fundamental Ideas in Algebra and Geometry. Three credit hours. Winter and Spring Quarters. Prerequisite, Mathematics 542 or 537 or 536 and 10 hours of physical science. Mathematics 652 may be taken without Mathematics 651 if permission is obtained from the instructor. Mr. Miller.

The aims of this course is to provide a suitable mathematical background for teachers and prospective teachers of secondary school mathematics. The content will include a discussion of rational numbers, real numbers, complex numbers, and finite fields; finite groups, theory of numbers; number scales; empirical and historical development of algebraic and geometric facts; undefined elements; types of assumptions used in algebra and geometry; Euclidean geometry; and certain non-Euclidean geometries.

661. Vector Analysis. Five credit hours. Spring Quarter. Prerequisite, Mathematics 601 and Physics 433, or the equivalent.

The algebra and calculus of vectors; applications to mechanics. Partial differential operators, transformation theorems for integrals. An introduction to the theory of the electrostatic potential.

670. Matrices and Determinants. Five credit hours. Winter Quarter. Mr. Kleinfeld.

This course covers the fundamentals of elementary matrix theory. Particular emphasis is given to the following topics: determinants and systems of linear equations, vector spaces, rank, the characteristic polynomial, and similarity and congruence transformation.

* Not given in 1956-1957.

672-673. Mathematical Statistics. Five credit hours. Winter and Spring Quarters. Prerequisite, Mathematics 543 or 538.

Permutations, combinations. Total, compound, conditional probability. Discrete distributions. Continuous distributions. Binominal, Poisson, normal chi-square, t, F distributions. Limit theorems of probability. Theory of testing simple hypotheses. Particular applications involving t tests, chi-square tests, F tests, non-parametric tests. Confidence intervals. Regression analysis. Analysis of variance in a four-way classification.

680. Elementary Number Theory. Five credit hours. Spring Quarter. Mr. Mann.

Congruences and Diophantine equations, continued fractions, the quadratic reciprocity law, and selected topics. This course utilizes concrete examples to introduce concepts and methods of modern algebra.

692. Numerical Analysis I. Five credit hours. Autumn Quarter. Prerequisite, Mathematics 543 or 538, or permission of the instructor. Mr. Reeves, Mr. Whitney.

Finite differences, interpolation, summation, difference equations, solutions of equations, numerical integration and differentiation, numerical solution of differential equations.

731. Probability and Statistics. Five credit hours. Autumn Quarter. Prerequisite, Mathematics 601. Mr. Whitney.

Combinatorial probability. Non-parametric tests. The binomial, multinomial, and Poisson distribution laws. Distribution functions. Riemann-Stieltjes integrals. Moments and characteristic function. The limit theorems of probability. Derivations of the distribution of test statistics. Applications.

733. Statistics: Design and Analysis of Experiments. Five credit hours. Winter Quarter. Prerequisite, Mathematics 672 or Mathematics 732. Mr. Mann.

The analysis of variance distribution. Likelihood ratio tests. Tests of linear hypothesis. Analysis of variance in an r-way classification. Non-orthogonal data. Randomized blocks. Latin squares, incomplete balanced blocks, lattices and lattice squares.

NOTE: TEACHING COURSES. For the Teaching Courses in this area, see the Department of Education. Courses 659 and 660.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

METEOROLOGY

A number of courses in meteorology are offered within the Department of Physics. Students who are interested in this field should confer with Professor H. Nielsen, 107 New Physics Building. See Physics 420, 643, and 647.

MILITARY SCIENCE

Office, 204 Military Science Building

COLONEL EDGAR AND STAFF

The Army Reserve Officers' Training Corps program conducted at The Ohio State University is a four year course consisting of two years of Basic and two years of Advanced instruction. Its primary objective is to produce junior officers suitable for continued development as officers in the Regular Army and the Army Reserve. The instruction is such, therefore, as to develop leadership and other traits and qualities essential in an officer and, also, qualities of value as a citizen. Upon successful completion of the entire program, and attaining his baccalaureate degree, the graduate will be eligible for a commission as a Second Lieutenant in the U.S. Army Reserve and, in the case of those of sufficiently high standing, for a like commission in the Regular Army.

A student will normally be qualified for enrollment in first year Basic instruction who is: (1) a male citizen of the United States; (2) physically qualified according to prescribed standards; (3) of good character; and (4) over 14 years of age but not beyond an age that would permit him to complete the program, obtain a baccalaureate degree, and qualify for commission prior to reaching his 28th birthday.

The Board of Trustees of The Ohio State University has established the requirement that

all qualified male students must take ROTC instruction during the first six quarters in which they are enrolled. The Basic Course of instruction, therefore, is normally compulsory. Enrollment in the Advanced Course is elective on the part of the student, but is confined to those selected by the PMST. Such selection is based upon grades attained in Military Science and other academic work and also upon demonstrated leadership and other required traits and qualities.

Under present governmental policies, selected students enrolled in Military Science may be deferred from induction into military service for a period which will permit them to complete the entire ROTC program and, normally, their academic work. Students selected for and formally enrolled in the Advanced Course are paid approximately \$27 a month, exclusive of a six week period of summer camp, during which time they will receive approximately \$106 plus travel allowance to and from camp. Upon graduating and receiving a commission the graduate may expect to: (a) serve on active duty for a two-year period and remain a member of a regular or reserve component of the Army until the 6th anniversary of receipt of his commission; or (b) serve on active duty of training for 6 months and remain a member of a reserve unit until the eighth anniversary of his commission. The type of service to be required will vary from time to time depending upon the needs of the service then existing.

The school year 1956-1957 will be a period of conversion of the Army ROTC curriculum from instruction in tactics and techniques of the separate branches of the Army to a program of instruction in General Military Science. Second year advanced course (MS IV) students only, will continue to receive branch instruction during the conversion period, in order to complete their present program.

Details as to courses of instruction are as follows:

MILITARY SCIENCE I (Freshmen)

401 (First Quarter), 402 (Second Quarter), 403 (Third Quarter). Courses must be completed, in sequence, prior to enrolling in the succeeding 400 series courses.

Two credit hours per Quarter. One two-hour recitation period and one hour of drill per week.

Organization of the Army and ROTC. Individual Weapons and Marksmanship. American Military History. School of the Soldier and Exercise of Command.

MILITARY SCIENCE II (Sophomores)

501 (First Quarter), 502 (Second Quarter), 503 (Third Quarter). Courses must be completed, in sequence, prior to enrolling in the succeeding 500 series courses.

Two credit hours per Quarter. One two-hour recitation period and one hour of drill per week.

American Military History. Map Reading. Crew Served Weapons and Gunnery. School of the Soldier and Exercise of Command.

MILITARY SCIENCE III (Juniors)

601. (Autumn Quarter), 602 (Winter Quarter), 603 (Spring Quarter).

Three credit hours per Quarter. Two two-hour recitations and one hour of drill per week.

Crew Served Weapons and Gunnery. Small Unit Tactics and Communications, Leadership. Military Teaching Methods. Organization and Missions of the Arms and Services. School of the Soldier and Exercise of Command.

MILITARY SCIENCE IV (Seniors)

For the school year 1956-1957, Military Science IV courses are:

711 Armor	722 Signal Corps
712 Artillery	723 Chemical Corps
721 Corps of Engineers	724 Transportation Corps

Subsequent to the school year 1956-1957 the course for the second year Advanced Course students will be:

701 (Autumn Quarter), 702 (Winter Quarter), 703 (Spring Quarter).

For all Military Science IV courses—Three credit hours per Quarter. Two two-hour recitations and one hour of drill per week.

Operations. Logistics. Military Administration and Personnel Management. Service Orientation. School of the Soldier and Exercise of Command.

MINERALOGY

Office, 140 Lord Hall

PROFESSOR McCONNELL, ASSOCIATE PROFESSOR FOSTER, ASSISTANT PROFESSORS EHLERS AND LEVISON

503. Mineralogy of Gems. Three credit hours. Spring Quarter. Two lectures and one two-hour laboratory period each week. Prerequisite, a general course in college chemistry or physics or geology. Mr. Levison.

Elementary consideration of the physical and optical properties of gems, including laboratory identification of some of the common varieties.

Not open to students who have credit for Mineralogy 402.

MUSIC

Office, 105 Hughes Hall

The School of Music is a member of the National Association of Schools of Music

PROFESSORS WEIGEL, DIERCKS, GILLILAND, HARDESTY, LEEDER (EMERITUS), McBRIDE, PHELPS, WILSON, ASSOCIATE PROFESSORS DIERKER, EVANS, HADDAD, HARDY (EMERITUS), JONES, KUEHEFUHS, MCGINNIS, MOONEY, SLAWSON, STAIGER, THOMAS, AND VEDDER, ASSISTANT PROFESSORS ANAWALT, FYFE, HELD, MUSCHICK, TITUS, MR. BURKHALTER, MISS CAVE, MR. FRUCHTMAN, MR. GREEN, MR. KEARNS, MR. McCLURE, MR. MONTEUX, MR. MULLER, MR. POLAND, MR. RAMSEY, MISS SEXTON, MR. SPOHN, MR. STOLL, MR. WILSON, MR. BARGER, MR. KIRK, MISS NORRIS, MR. PAGE, MISS PORTER

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UNIVERSITY REGULATIONS

- (1) A MUSIC LABORATORY FEE of \$20 per Quarter is assessed, in addition to the University Incidental and University Matriculation fees, for all undergraduate and graduate students majoring in music or music education.
 - (a) The Music Laboratory Fee is a service charge and covers special services such as use and maintenance of university instruments, music materials and supplies, practice and listening rooms, etc.
 - (b) Students who have paid the Music Laboratory Fee will receive a season Concert Series ticket upon presentation of fee card at the Music Office, Room 105 Hughes Hall.
- (2) Students will not be permitted to attend applied, and theory music classes unless the music admission card (green) is presented to the instructor.
- (3) Courses numbered 400 to 599 are open to undergraduate students.
- (4) Courses numbered 600 to 799 are open to advanced undergraduates and graduate students.
- (5) Courses numbered 800 and above are open to graduate students only.

REVIEW COURSES AND SPECIAL COURSES

Review of the Elements and Techniques of Music.

Preceding the class sessions of Music 401 and Music 408A, B, C, D, E, F, or G, placement tests will be given to determine the ability of students in these subjects. (See School of Music bulletin for details of time and place.) Students with less than the expected ability will be requested to change from the original registration to Music 400X or MusicA, B, C, D, E, F, or G. Students who have had a broad experience in high school musical activities and at least two years of private instruction should not experience any difficulty in qualifying for admission to Music 401 or Music 408A, B, C, D, E, F, or G.

400A, B, C, D, E, F or G. Applied Music. No credit. All Quarters. Applied Music Staff.

The fundamentals and techniques of applied music. This course is designed for and open only to students who do not qualify in placement test, or who do not, in the first Quarter, maintain satisfactory standards of work in Music 408A, B, C, D, E, F, or G.

400K, L, M. Introduction to Music. Required of and open only to first year students majoring in music. Two classes, section meetings, or concert attendance each week. A final grade for credit will be given when the third Quarter of the sequence is completed (400M). Mrs. Mooney.

Lectures, discussions, conferences, and field trips, which will include: (a) Orientation of the student to University resources and requirements to School of Music offerings and personnel, (b) Introduction to fields of Music, (c) Assessment and advisement of the student.

(Section) 400K. Autumn Quarter, no credit.

(Section) 400L. Winter Quarter, no credit.

(Section) 400M. Spring Quarter, two credit hours.

400N, P, R. Concert Attendance. Attendance at twenty-seven concerts or recitals for three Quarters on a continuous basis from the programs listed below. A final grade for credit will be given at the end of the Quarter in which sequence is completed (400R).

Required of sophomores and juniors in all Music curricula to a total of two credit hours. The record of attendance will be kept in the Music School office. Mr. Weigel.

Participation as an active listener for the purpose of developing discernment and appreciation in music.

(Section) 400N. Any Quarter, no credit.

(Section) 400P. Any Quarter, no credit.

(Section) 400R. Any Quarter, one credit hour.

Concerts and recitals approved for attendance are as follows:

- University Guest Artist Series
- University Faculty Recitals
- Graduating Recitals
- Student Recitals
- University Chorus Concerts
- University Symphonic Choir Concerts
- University Women's Glee Club Concerts
- University Men's Glee Club Concerts
- University Symphony Orchestra Concerts
- University Symphonic Band Concerts
- Collegium Musicum Concerts
- Other announced special concerts

400X. Review of the Fundamentals of Music Theory. No credit. One Quarter. Autumn and Spring. Five recitations each week. Theory staff.

This course is designed for and open only to students who do not qualify in placement test or who do not, in the first Quarter, maintain satisfactory standards of work in Music 401.

THEORY AND COMPOSITION

401. Music Theory. Four credit hours. One Quarter. Autumn and Spring. Five meetings each week. Prerequisite, placement test or Music 400X. Required of all music majors. Theory staff.

An integrated course in the basic elements of music, including interval study, scale structure, triad formation, cadence progression, rhythmic drill, sight singing, dictation, and keyboard practice.

402. Music Theory. Four credit hours. One Quarter. Autumn and Winter. Five meetings each week. Prerequisite, Music 401. Theory staff.

An integrated course in music theory using first and second inversion of triads, cadence progressions, interval studies, rhythmic drill, sight singing, dictation, and keyboard practice.

403. Music Theory. Four credit hours. One Quarter. Winter and Spring. Five meetings each week. Prerequisite, Music 402. Theory staff.

An integrated course in music theory using seventh chords and their inversions, more complex interval studies, rhythmic drill, sight singing, dictation, and keyboard practice.

501. Music Theory. Four credit hours. Autumn Quarter. Five meetings each week. Prerequisite, Music 402. The staff.

An integrated course in music theory including common chord modulation to next related keys, borrowed tones, borrowed chords, complex rhythmic drill, sight singing, dictation and keyboard drill.

502. Music Theory. Four credit hours. Winter Quarter. Five meetings each week. Prerequisite, 501. Theory staff.

An integrated summation course in music theory including chromatic chord forms, chromatic modulation, complex rhythmic drill, sight singing, dictation and keyboard practice.

503. Music Theory. Four credit hours. Spring Quarter. Five meetings each week. Prerequisite, Music 502. Theory staff.

An integrated summation course in music theory including all previous material applied in freer writing, improvisation at the keyboard and sight singing of complex materials.

530. Form and Analysis. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Music 503. Miss Kuehefuhs, Mr. McClure, Mr. Vedder.

A study of the design and harmonic structure of simple and complex forms of music composition. Standard works analyzed.

531. Instrumentation. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 503. Mr. McClure.

An elementary course in scoring for the instruments of the orchestra, the band, and small choral groups.

Not open to students who have credit for Music 631.

561. Counterpoint. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Music 503. Miss Kuehefuhs.

A fundamental course in counterpoint including species counterpoint, double counterpoint, imitation and two-voice canon.

Not open to students who have credit for Music 761.

581. Composition. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 530. Mr. Vedder.

Beginning creative writing in the small forms.

Not open to students who have credit for Music 781.

632. Orchestration. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Music 531. Mr. Phelps.

Scoring for wood-wind and brass instruments in various combinations and for wind band, including an analysis of the scores and arrangements of Stravinsky, Winterbottom, Godfrey, Leidzen, Cailliet, and Gould. Attendance at a number of rehearsals and concerts of symphonic bands will be required.

†633. Orchestration. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Music 531. Mr. Phelps.

Continued practice in scoring for orchestras of various sizes. Analysis of orchestral scores of Wagner, Debussy, Stravinsky and others. Attendance at a number of rehearsals and concerts of symphony orchestras will be required.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, permission of the instructor. All instructors.

Investigation of minor problems in the field of music.

† Not given during the academic year, 1956-1957.

662. Counterpoint. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 561. Miss Kuehefuhs.

Counterpoint in two parts, based on the contrapuntal practices of the eighteenth century. Writing of two-part inventions. Some work in three-part counterpoint.

Not open to students who have credit for Music 762.

663. Fugue. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 662. Mr. Phelps.

A detailed study of the fugue, and writing of three and four voice fugues. A brief survey of chorale figuration and other contrapuntal forms.

Not open to students who have credit for Music 763.

***665. Advanced Harmonic Analysis.** Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 530. Mr. Vedder.

A study of representative compositions of various periods, with emphasis on formal, harmonic and stylistic analysis. The course is designed to provide the student with an analytic technique applicable to the music of any period.

667. Advanced Keyboard Harmony. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 503.

Intensive practice in playing at the keyboard material learned previously. Modulation by common tone and by common chord, chromatic modulation, figured base, harmonization of melodies at sight, transposition, improvisation.

761. Modal Counterpoint. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, junior standing in music or permission of the instructor. Miss Kuehefuhs.

A study of modal counterpoint based on the vocal polyphonic style of the Sixteenth Century. Analysis of representative works; practice in two, three and four part work, leading to the writing of motets.

781. Composition. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Prerequisite, Music 531. Mr. Phelps.

Opportunity for, and guidance in, creative writing. The course includes analysis and discussion of devices used in contemporary music, and the student is expected to acquire a working knowledge of these materials.

This course may be repeated to a maximum of nine Quarter hours.

Not open to students who have credit for Music 782 and 783.

APPLIED MUSIC

New students receive classification in the appropriate course and Quarter following placement tests held during the registration period preceding each Quarter. (See page 77 for requirements.)

Instruction is given in individual lessons of two one-half hour periods each week.

408. Applied Music. Two credit hours. All Quarters. Prerequisite, passing of entrance examination or Music 400 A, B, C, D, E, F, or G. Concurrent requirement Music 400 K, L, M.

Instruction in Applied Music for the purpose of developing musicianship, performance, and a wide reading knowledge of musical literature. A brief survey of the history of the instrument and its literature will also be made.

Required of students in Music Curricula I, II, III, IV, and V to a minimum of six Quarter hours.

Open to other qualified students within the limits of instructional facilities by permission of the School of Music. See Mr. Weigel.

(Section) A. (Piano) Mr. Haddad, Miss Anawalt, Miss Jones, Mrs. Mooney, Mr. Muller, Mr. Montoux.

(Section) B. (Voice) Mr. Gilliland, Mr. Staiger, Miss Cave, Mr. Muschick, Mrs. Porter.

* Not given in 1956-1957.

(Section) C. (Strings) Mr. Hardesty, Mr. Fruchtmann, Mr. McClure, Mr. Page.

(Section) D. (Wood Winds) Mr. McGinnis, Mr. Poland, Mr. Green, Mr. G. Wilson, Mr. Titus.

(Section) E. (Brass) Mr. Evans, Mr. Kearns, Mr. Stoll.

(Section) F. (Organ) Mr. Held.

(Section) G. (Percussion) Mr. Spohn.

The proficiency levels to be attained and other course requirements are stated in the supplementary Applied Music Bulletin.

508. Applied Music. Two credit hours. All Quarters. Prerequisite, Music 408 A, B, C, D, E, F, or G. Concurrent requirement, Music 400R.

Instruction in Applied Music for the purpose of developing musicianship, performance, and a wide reading knowledge of musical literature.

Required of students in: Curriculum I to a minimum of twelve Quarter hours, Curriculum II to a minimum of eight Quarter hours, Curriculum III to a minimum of twenty Quarter hours, Curriculum IV to a minimum of six Quarter hours.

Open to other qualified students within the limits of instructional facilities by permission of the School of Music. See Mr. Weigel.

(Section) A. (Piano) Mr. Haddad, Miss Anawalt, Miss Jones, Mr. Muller, Mr. Montoux.

(Section) B. (Voice) Mr. Gilliland, Mr. Staiger, Miss Cave, Mr. Muschick, Mrs. Porter.

(Section) C. (Strings) Mr. Hardesty, Mr. Fruchtmann, Mr. McClure, Mr. Page.

(Section) D. (Wood Winds) Mr. McGinnis, Mr. Poland, Mr. Green, Mr. G. Wilson, Mr. Titus.

(Section) E. (Brass) Mr. Evans, Mr. Kearns, Mr. Stoll.

(Section) F. (Organ) Mr. Held.

(Section) G. (Percussion) Mr. Spohn.

The proficiency levels to be attained and other course requirements are stated in the supplementary Applied Music Bulletin.

509. Applied Music. Four credit hours. All Quarters. Prerequisite, Music 408 A, B, C, D, E, F, or G. Concurrent requirement, Music 400R.

Performance in Applied Music at professional level. The student will be prepared in repertoire, musicianship, and performance adequate to meet any professional or teaching requirement in so far as a thorough knowledge of the instrument and the literature for which it can apply.

Required of all students in Curriculum V to a minimum of thirty-six Quarter hours.

Open to other qualified students within the limits of instructional facilities by permission of the School of Music. See Mr. Weigel.

(Section) A. (Piano) Mr. Haddad, Miss Anawalt, Miss Jones, Mrs. Mooney, Mr. Muller, Mr. Montoux.

(Section) B. (Voice) Mr. Gilliland, Mr. Staiger, Miss Cave, Mr. Muschick, Mrs. Porter.

(Section) C. (Strings) Mr. Hardesty, Mr. Fruchtmann, Mr. McClure, Mr. Page.

(Section) D. (Wood Winds) Mr. McGinnis, Mr. Poland, Mr. Titus, Mr. G. Wilson.

(Section) E. (Brass) Mr. Evans, Mr. Kearns, Mr. Stoll.

(Section) F. (Organ) Mr. Held.

(Section) G. (Percussion) Mr. Spohn.

The proficiency levels to be attained and other course requirements are stated in the supplementary Applied Music Bulletin.

510. Graduating Recital. Two credit hours. All Quarters. Prerequisite, completion of requirements for Curriculum V (Music 509) as stated. Applied Music staff.

This course provides special preparation for the presentation of the Applied Music graduating recital for the B.M. degree.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, permission of the applied music instructor.

709. Applied Music. Four credit hours. All Quarters. Prerequisite, graduate standing in Music and placement examination.

The study of Applied Music at graduate level. A specialized and intense study of Applied Music Literature and the techniques of performance.

Open to other qualified students within the limits of instructional facilities by permission of the School of Music. Mr. Weigel.

A minimum of three Quarters study must be completed to secure credit. A progress grade will be recorded until the requirement is satisfied.

(Section) A. (Piano) Mr. Haddad, Miss Jones.

(Section) B. (Voice) Mr. Gilliland, Mr. Diercks.

(Section) C. (Strings) Mr. Hardesty.

(Section) D. (Wood Winds) Mr. McGinnis.

(Section) E. (Brass) Mr. Evans.

(Section) F. (Organ) Mr. Held.

The Music Literature to be studied and the proficiency levels to be attained for each Division will be determined by the instructor.

HISTORY AND LITERATURE OF MUSIC

404. The Appreciation of Music. Three credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Three lectures each week. Miss Dierker, Mr. Ramsey, Mr. Fruchtmann.

For the music listener with little or no formal training in music. Lectures and musical illustrations in explanation of the principal elements involved in intelligent listening. Music illustrations selected primarily from standard concert repertoire or from current concert and recital offerings.

Not open for credit to students in Curricula I, II, III, or V.

405. The Appreciation of Music. Three credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Three lectures each week. No previous experience with music is required. Mr. Wilson, Mr. Fruchtmann.

For the music listener with little or no formal training in music. Music in its relationships to religion, the dance, the theatre, and recreational activities, with reference to the style of expression in different periods.

Not open for credit to students in Curricula I, II, III, or V.

406. History and Appreciation. Three credit hours. Autumn Quarter. Three recitations each week. Required of all music majors and minors. Miss Dierker, Mr. Fruchtmann.

A study of the development of music from earliest times through the polyphonic and classical periods with special emphasis on the historical, social, and cultural backgrounds of each period. Lectures will be supplemented by assigned readings and musical illustrations.

407. History and Appreciation. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 406. Required of all music majors and minors. Miss Dierker.

The music of the Romantic and Modern Schools will be studied. Lectures will be supplemented by assigned readings and musical illustrations.

505. A Survey of Music Literature. Three credit hours. Autumn Quarter. Three lectures each week. No previous experience with music is required. Mr. Wilson.

An experience in listening to the master compositions, with consideration of the factors in the music which have made them great, and a study of the relation of form in music to other forms of experience.

Not open for credit to students specializing in music.

601. The Romanticists. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, junior standing in Music or permission of instructor.

The music of the romantic period in Germany and France.

***602. The Opera of the Nineteenth Century.** Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, junior standing in Music or permission of the instructor. Mr. Wilson.

A short review of the history of opera; a study of the complete more important operas of the Nineteenth Century with the chief emphasis on the Wagnerian music drama; and a consideration of the problems involved in a hybrid art.

603. Modern Music. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, junior standing in Music or permission of the instructor. Mr. Wilson.

A brief survey of modern developments with special reference to the composers of France and Russia.

604. Organ Literature. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, junior standing in Music or permission of the instructor. Mr. Held.

A comprehensive survey from the earliest compositions to the works of the present-day composers.

605. Choral Literature. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, junior standing in Music or permission of the instructor. Mr. Wilson.

Choral composers and literature with special consideration of the Sixteenth and Seventeenth Centuries.

606. The Literature of Chamber Music. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, junior standing in Music or permission of the instructor. Mr. Wilson.

A survey of the chamber music of the classical and romantic periods with performance, analysis, and discussion.

607. The Classic Period. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, junior standing in Music or permission of the instructor. Mr. Wilson.

A study of organ and other keyboard compositions and of chamber music and early orchestra writing in Germany, Italy, France, and England in the period 1650 to 1725.

608. Music Literature of Latin America. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, junior standing in Music or permission of the instructor. Miss Dierker.

Designed to further an understanding of the cultural background of the peoples of Latin America through a study of their music. A brief survey of the origins and development of this music with emphasis on the contemporary period.

* Not given in 1956-1957.

609. Medieval Modes. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, junior standing in Music or permission of the instructor. Miss Kuehefuhs.

A study of the historical background and characteristics of Plainsong, including the technical aspects of notation, modes, rhythm and chironomy.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, permission of the instructor. All instructors.

Investigation of minor problems in the field of music.

(x) Research Techniques.

MUSIC EDUCATION

511. Applied Music Methods and Materials. Required of all students in Curricula I, II, and III.

(Section) A. (Piano) Two credit hours. Autumn, Winter, and Spring Quarters. Four classes each week. Miss Anawalt.

(Section) A. Twilight School Only. One credit hour. Autumn, Winter, and Spring Quarters. One two-hour class each week. Miss Sexton.

(Section) B. (Voice) Two credit hours. Autumn, Winter, and Spring Quarters. Four classes each week. Mr. Gilliland, Mr. Muschick, Mrs. Porter.

(Section) C. (String Instruments) Two credit hours. Autumn and Winter Quarters. Four classes each week. Mr. Burkhalter.

(Section) D. (Wood-wind Instruments) Two credit hours. Autumn and Spring Quarters. Four classes each week. Mr. Titus, Mr. G. Wilson.

(Section) E. (Brass Instruments) Two credit hours. Winter and Spring Quarters. Four classes each week. Mr. Evans, Mr. Kearns.

This course is designed to give facility to performance of instruments listed, together with the study of the methods of these instruments.

512. Applied Music Methods and Materials. Required of all music majors in Curricula II and III to a minimum of four Quarter hours. Prerequisite, Music 511.

(Section) C. (String Instruments) Two credit hours. Winter and Spring Quarters. Four classes each week. Mr. Burkhalter.

(Section) D. (Wood-wind Instruments) Two credit hours. Autumn and Winter Quarters. Four classes each week. Mr. Titus.

(Section) E. (Brass Instruments) Two credit hours. Winter and Spring Quarters. Four classes each week. Mr. Stoll.

513. Applied Music Methods and Materials. (Percussion Instruments). Two credit hours. Spring Quarter. Four classes each week. Required of all music students in Curricula II and III. Mr. Spohn.

Methods and class performance on the instruments of the percussion family. A study of materials and their presentation.

514. Music for Group Recreation. One credit hour. Spring Quarter. One two-hour class period each week. Miss Sexton.

Preparation and participation in folk singing, dancing, and playing simple accompaniments at the keyboard. Experience in group leadership. Designed for recreation and camp leaders, social workers and teachers of music.

Not open to piano majors or minors.

515. Fundamentals of Opera. Two credit hours. One Quarter. Autumn, Winter, Spring. Two two-hour classes each week. An audition or interview is required for admission to the course. Mr. McClure, Miss Cave, and others.

Instruction and laboratory experience in rehearsal techniques, study of operatic literature, and coaching and study of operatic roles and performances.

522. Elementary School Music. Five credit hours. Autumn Quarter. Five recitations each week. Required of students in Music Curricula I, II, and III, third year. Prerequisite, junior standing in Music. Mr. Ramsey, Mr. McBride, Miss Thomas.

Music materials for teaching in elementary grades, with special consideration given to teaching procedures. One class period each week is devoted to observation.

Not open to students who have credit for Music 622.

523. Music for Children. Three credit hours. Winter Quarter. Three recitations each week. Music Curriculum I and III, third year. Prerequisite, Music 522. Miss Thomas.

Singing and listening materials suitable for the elementary classroom and for school and public performance.

Not open to students who have credit for Music 623.

524. Vocal Music for Junior and Senior High Schools. Five credit hours. Spring Quarter. Five recitations each week. Music Curricula I and III, third year. Prerequisite, Music 522. Mr. Ramsey.

Music materials and their presentation in junior and senior high schools. The relationship of music as an integral part of the total school program is emphasized. Observation in public schools.

Not open to students who have credit for Music 624.

540. Beginning Conducting. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 502. Mr. Gilliland, Mr. McGinnis.

The basic technique of the baton. Music suitable for junior and senior high school will be studied. A syllabus of selected literature and reading assignments will be used as a basis of study.

Not open to students who have credit for Music 440 and 543.

541. Instrumental Music for the Junior and Senior High Schools. Five credit hours. Winter Quarter. Five recitations each week. Required of music students in Music Curricula II and III, third year. Prerequisite, Music 522. Mr. McBride.

Music materials and their presentation in Junior and Senior high schools. The relationship of music as an integral part of the total school program is emphasized. Observation in public schools.

Not open to students who have credit for Music 641.

546. Survey and Appreciation of Music Literature. Two credit hours. One Quarter. Autumn, Winter, Spring. Four recitations each week. Required of and open only to students in the Curriculum in Elementary Education. No prerequisite. Miss Slawson, Miss Sexton, Mr. Ramsey.

Lectures, illustrations, and analyses of elements involved in active, intelligent listening, understanding, and appreciation of representative works of the great masters of music.

Not open to students who have credit for Music 446.

547. Fundamentals of Music. Three credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Required of students in the Curriculum in Elementary Education. Prerequisite, Music 446 or 546. Miss Sexton, Miss Norris.

This course includes ear-training, music reading, creative writing, voice production, and some instrumental experience. School song materials are used for this work.

Not open to students who have credit for Music 447.

548. Music Education. Three credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Required of students in the Curriculum in Elementary Education. Prerequisite, Music 446 and 447 or 546 and 547. Miss Slawson, Miss Sexton, Mr. Ramsey.

Music literature and teaching aids for children, including singing, rhythmic, creative, and listening experiences, and their presentation.

Not open to students who have credit for Music 448.

*549. Music Education. Three credit hours. Spring Quarter. Five recitations each week. Required of and open only to students following the Dual Certification or Reconversion Curriculum in Education. Miss Sexton.

A general course designed to include appreciation, elements of music notation and music materials with special attention to their presentation in the elementary schools.

†622. Music Education in the Elementary School. Five credit hours. Summer Quarter. Five recitations each week. Prerequisite, junior standing in music.

Designed for teachers of Music in the Elementary Schools. Special consideration will be given to the selection, presentation, and organization of material, and teaching procedures. Observation in the Elementary Schools.

Not open to students who have credit for Music 523.

†623. Music Literature for the Elementary School. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite or concurrent. Music 662.

Designed to familiarize the student with art and folk music of various cultures for the listening and singing activities in the integrated curriculum of the elementary school.

†624. Music Education in the Secondary School. Five credit hours. Summer Quarter. Five recitations each week. Prerequisite, Music 662.

A critical study of music materials and literature for use in the secondary schools and their presentation. Observation in secondary schools.

†641. Instrumental Music Education. Five credit hours. Five recitations each week. Prerequisite, junior standing in music.

Organization and administration of instrumental music as it functions in the secondary school. Special consideration will be given to the school orchestra, concert band, marching band, small ensembles. Observation in the secondary schools.

643. Advanced Conducting (Instrumental). Three credit hours. Spring Quarter. Three classes each week. Prerequisite, Music 530 and 540. Mr. McGinnis.

This course aims to develop the power to interpret the larger forms of instrumental literature and to read from full score.

Open to students demonstrating advanced musicianship and technical skills in conducting.

646. Advanced Conducting (Vocal). Three credit hours. Autumn Quarter. Three classes each week. Prerequisite, Music 530 and 540. Mr. Gilliland.

This course aims to develop the power to interpret the larger forms of choral literature and to read from full score.

Open only to students demonstrating advanced musicianship and technical skills in conducting.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, permission of the instructor. All instructors.

Investigation of minor problems in the field of music.

656. Principles of Music Learning. Three credit hours. Winter Quarter. Three recitations each week.

An analysis of the factors in learning to appreciate and perform music in early childhood and through adult life.

†660. Principles of Music Theory. Three credit hours. Five recitations each week. Prerequisite, senior standing in music.

Analytical procedures for sight singing, score reading, and the evaluation of music materials.

†712. Supervision of Music in the Elementary Schools. Three credit hours. Three recitations each week. Open to seniors and to graduate students majoring in music.

A study of the specific problems of music supervision with special attention given to curriculum construction in the elementary schools.

Not open to students who have credit for Music 612.

† Not given during the academic year, 1956-1957.

* Not given in 1956-1957.

†713. **Supervision of Music in Secondary Schools.** Three credit hours. Three recitations each week. Open to seniors and to graduate students majoring in music.

This course is designed to study evaluation criteria and the problems of the music supervisor in the secondary schools.

Not open to students who have credit for Music 613.

†717. **Song Literature.** Three credit hours. Three periods each week. Prerequisite, junior standing in music and permission of the instructor.

The study of song literature selected to meet the needs of the student, artist, or teacher; functions of the types of songs; program building.

†719. **Theory Pedagogy.** Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, senior standing in music.

Basic principles and problems in teaching of correlated music theory. Special emphasis on theory instruction in secondary school.

†720. **Piano Pedagogy.** Three credit hours. Summer Quarter. Six class lectures each week. Prerequisite, minimum of six Quarter hours of applied study in piano and graduate standing in music.

An analysis of the principles and practices current in the teaching of piano. This course is designed for graduate students who have had experience in teaching or for students who have had a background of experience enabling them to comprehend advanced materials, together with experimental and advanced methods of procedure and principles of teaching.

†721. **Vocal Pedagogy.** Three credit hours. Prerequisite, a minimum of six Quarter hours of applied study in voice and graduate study in music.

An analysis of the principles and practices current in the teaching of voice.

This course is designed for graduate students who have had experience in teaching or for students who have had a background of experience enabling them to comprehend advanced materials, together with experimental and advanced methods of procedure and principles of teaching.

†722. **String Instrument Pedagogy.** Three credit hours. Prerequisite, a minimum of six Quarter hours of applied study in string instruments and graduate study in music.

An analysis of the principles and practices in the teaching of strings.

This course is designed for graduate students who have had experience in teaching or for students who have had a background of experience enabling them to comprehend advanced materials, together with experimental and advanced methods of procedure and principles of teaching.

†723. **Wood-Wind Instrument Pedagogy.** Three credit hours. Prerequisite, a minimum of six Quarter hours of applied study in the Woodwind family and graduate standing in music. Mr. McGinnis.

An analysis of the principles and practices current in the teaching of woodwinds.

This course is designed for graduate students who have had experience in teaching or for students who have had a background of experience enabling them to comprehend advanced materials, together with experimental and advanced methods of procedure and principles of teaching.

†724. **Brass Instrument Pedagogy.** Three credit hours. Six lectures each week. Prerequisite, a minimum of six Quarter hours of applied study in brass instruments and graduate standing in music. Mr. Evans.

An analysis of the principles and practices current in the teaching of brass instruments.

This course is designed for graduate students who have had a background of experience enabling them to comprehend advanced materials, together with experimental and advanced methods of procedure and principles of teaching.

747. **Problems in Vocal Music Education.** One to five credit hours. All Quarters. Open by permission of the instructor, to supervisors and teachers of music who have junior standing in music. Graduate staff.

Study of problems encountered in the teaching and supervising of music. Additional investigation of the course of study, special programs, the integrated courses, etc.

This course may be repeated to a maximum of ten hours credit.

Not open to students who have credit for Music 647.

† Not given during the academic year, 1956-1957.

748. Choral Problems. One to five credit hours. All Quarters. Prerequisite, junior standing in music and permission of the instructor. Graduate staff.

Study of the problems encountered in developing choruses and church choirs. A full chorus and church choir will be available for observation.

This course may be repeated to a maximum of ten hours credit.

Not open to students with credit for Music 648 and 748, if credit totals more than ten hours.

749. Problems in Instrumental Music Education. One to five credit hours. All Quarters. Lectures, observations and special problems. Prerequisite, junior standing in music and permission of the instructor. Graduate staff.

Study of problems encountered in teaching, supervision and organization of the instrumental music program. A full orchestra or band will be available for observation.

This course may be repeated to a maximum of ten hours credit.

Not open to students who have credit for Music 644.

CHURCH MUSIC

576. Field Experience in Church Music. Two credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, Music 540 and 671 or concurrent 671. Mr. Diercks.

Supervised experience in the actual church situation.

This course may be repeated three Quarters.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, the permission of the instructor. Mr. Held, Mr. Diercks.

Service playing and other problems in church music. Mr. Held and Mr. Diercks.

670. Music in the Church. Three credit hours. Winter Quarter. Three recitations or lectures each week. Prerequisite, at least 45 Quarter hours of music courses or permission of the instructor. Mr. Diercks.

A consideration of the forms of worship and symbols found in the church. A study of traditional and modern trends in all forms of worship with special emphasis on the ties between music, other arts, and the litany of the service. A study of the history of hymns.

671. Technics and Materials for Church Choirs. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, at least forty-five Quarter hours of music courses or permission of the instructor. Mr. Diercks.

A study of methods and materials for church choirs. The study of practical problems of mounting a church service, chanting, processional, etc., with consideration for anthem selection and performance.

Not open to students who have credit for Music 772.

748. Choral Problems. One to five credit hours. All Quarters. Prerequisite, junior standing in music and permission of the instructor. Mr. Diercks.

Study of the problems encountered in developing choruses and church choirs. A full chorus and church choir will be available for observation.

This course may be repeated to a maximum of ten hours credit.

Not open to students with credit for music 648 and 748, if credit totals more than ten hours.

MUSIC INSTITUTES

Midwinter Music Institutes. Dates to be announced. Resident and Guest staff.

A laboratory for the purpose of studying the clinical and pedagogical aspects of music and related fields. Lectures, demonstrations, and participation.

Open to all interested persons. No charge for admission. Required of all Music Majors.

GUEST ARTIST SERIES

The University presents annually a special GUEST ARTIST SERIES of concerts which includes all types of music and related arts.

Dates and artists will be announced later. Watch for Bulletins.

Admission: (1) Open to all students on campus for a special fee of \$4 for the season.

(2) Open also to University Faculty, University Business and Operational Staffs, and others for a special fee of \$6 for the season.

(3) Single admission: Students, \$1.25; Faculty, \$1.75.

(4) Music Students who have paid the music laboratory fee will receive series tickets without additional charge upon presentation of fee card.

Tickets on Sale at the School of Music Office, Room 105, Hughes Hall and at University Hall Box Office on night of concert.

TRYOUTS FOR CAMPUS MUSICAL ORGANIZATIONS

(To enroll in Music Organizations, students should observe the following).

FOOTBALL MARCHING BAND—Open to men students only.

Monday, September 17, 8:30 a.m. *Rehearsal Hall*. See Mr. Evans.

Please note that this tryout is scheduled before the start of Orientation Week. Rehearsals begin the same day, and candidates should be prepared to spend mornings, afternoons, and evenings in preparation for the first football game. Conflicts with required Orientation Projects may be adjusted at the band rehearsals.

REGIMENTAL BAND—ROTC students only. See Mr. Evans.

UNIVERSITY CONCERT BAND—Men and women students. See Mr. McGinnis.

UNIVERSITY ACTIVITIES BAND—Men and women students. See Mr. Evans.

UNIVERSITY ORCHESTRA—Men and women students.

Thursday, September 27, 1:00 to 4:00 p.m. *Hughes Hall*. Brasses and Percussion. Room 305; Wood Winds, Room 308; Strings, Room 310. See Mr. Hardesty.

Students should bring their own instruments to the tryouts except 'cellos, strings and brass basses, percussion instruments. A number of other instruments are also available for students who do not own their own.

UNIVERSITY CHORUS—Men and women students of all colleges.

Thursday, September 27; Friday, September 28; Monday, October 1 from 3:00 to 5:00 p.m., *Hughes Hall*, Room 109. See Mr. Diercks.

MEN'S GLEE CLUB

Thursday, September 27; Friday, September 28; Monday, October 1 from 3:00 to 5:00 p.m. *Hughes Hall*, Room 109. See Mr. Staiger.

WOMEN'S GLEE CLUB

Thursday, September 27; Friday, September 28; Monday, October 1 from 3:00 to 5:00 p.m. *Hughes Hall*, Room 109. See Mr. Muschick.

SYMPHONIC CHOIR—Men and women students from all colleges. By special appointment Thursday, September 27; Friday, September 28; Monday, October 1 from 3:00 to 5:00 p.m. *Hughes Hall*, Room 204. See Mr. Diercks.

Conflicts—For those whose schedules conflict with any of the above, see Mrs. Mooney, Student Coordinator, Room 106-G, *Hughes Hall*.

CAMPUS MUSIC GROUPS

University campus music groups are open to all students in the University. Students not specializing in music may enroll and receive credit toward any undergraduate degree for six Quarter hours in Music A, B, or D.

Music A. University Choruses. One credit hours. Three or more hours of rehearsal each week.

(Section) 1. **University Chorus.** Autumn, Winter, and Spring Quarters. Open to students in any department of the University. Candidates for membership are to secure the written permission of the director after individual conference. Mr. Diercks.

Oratorio and larger choral works are studied and performed.

*(Section) 2. **University Festival Chorus.** Autumn, Winter, and Spring Quarters. Mr. Diercks.

* Not given in 1956-1957.

Candidates may take this course for credit or non-credit in accordance with their needs. Membership is limited to experienced choral singers with admission after individual conference with the director.

A community and campus group organized to give further experience in choral singing to those no longer attending the University or those in the University qualified for such opportunity.

(Section) 3. Symphonic Choir. Autumn, Winter, and Spring Quarters. Admission is by audition only. Application should be made directly to the director. Mr. Diercks.

Symphonic Choir is a concert organization singing a variety of literature.

(Section) 4. Women's Glee Club. Autumn, Winter, and Spring Quarters. Mr. Muschick.

Membership in this concert group is open to all women students in the University. Examinations are held at stated periods and vacancies in the club filled with the best available voices.

Choral literature for women's voices.

(Section) 5. Men's Glee Club. Autumn, Winter, and Spring Quarters. Mr. Staiger.

Membership in this concert group is open to all men students in the University. Auditions are held at stated periods and vacancies in the club filled with the best available voices. Most admissions occur in the Autumn Quarter.

Choral literature for male voices.

Music B. University Orchestras. One credit hour. Three or more hours rehearsal each week. Admission by tryout and consent of the director.

(Section) 1. University Symphony Orchestra. Autumn, Winter, and Spring Quarters. Mr. Hardesty, Mr. Poland.

Membership is open to all University students and personnel and to symphony players from in and about Columbus.

Required of all students pursuing Curriculum II, III, V.

The University Symphony Orchestra is a ninety-piece orchestra of full instrumentation devoted to the preparation of standard and modern literature. The group gives at least three concerts each year.

*(Section) 2. University Community Orchestra. Mr. Hardesty.

Open for credit to students enrolled in Twilight School and for non-credit by permission of the director after tryout.

Designed for orchestra musicians from "In and about Columbus" who seek an outlet for their musical talent. Rehearsal and performance of standard orchestral literature.

(Section) 3. University Little Orchestra. Autumn, Winter, and Spring Quarters. Mr. Poland.

Open to students of any year or department in the University. Admission by tryout and approval of the director.

A selected group of players who will read and perform the best in orchestral literature. Performs for convocations, ensemble concerts, etc.

Music C. University Marching Bands. One credit hours. Three or more hours rehearsal each week. Admission by tryout and consent of the instructor.

(Section) 1. University Football Marching Band. One credit hour. Autumn Quarter. Mr. Evans and others.

Open to men students of any year or department in the University.

The University Marching Band is a selected group of 120 brass, wind, percussion players which performs at football games and rallies during the Autumn Quarter.

(Section) 2. Regimental Band. Winter and Spring Quarters.

Music D. University Bands. One credit hours. Three or more hours of rehearsal each week.

(Section) 1. The University Symphonic Band. Autumn, Winter, and Spring Quarters. Mr. McGinnis, Mr. Stoll.

* Not given in 1956-1957.

The membership is open to any student of any years, or department in the University, but is limited to performers of superior ability.

A selected group of limited membership devoted to the preparation and performance of the best band literature. The group gives public concerts and supplies music for University functions.

(Section) 2. The University Activities Band. Autumn, Winter, and Spring Quarters. Mr. Evans, Mr. Kearns.

Membership is open to students of any year or department of the University with the permission of the director.

An organization whose purpose is to provide band participation for those students who are unable, for one reason or another, to play in the University Symphonic Band. The group gives public concerts and supplies music for University functions.

Music F. University Small Ensembles. One credit hour. Two or more hours of rehearsal each week. Admission by tryout and consent of the director.

(Section) 1. Vocal Ensembles. Autumn, Winter, and Spring Quarters. Mr. Muschick.

(Section) 2. University Singers. Autumn, Winter, and Spring Quarters. Mr. Diercks.

* (Section) 3. Radio and Television Ensembles. Autumn and Spring Quarters.

(Section) 4. String Ensembles. Autumn, Winter, and Spring Quarters. Mr. Hardesty, Mr. McClure, Mr. Page.

(Section) 5. Woodwind Ensembles. Autumn, Winter, and Spring Quarters. Mr. McGinnis, Mr. Titus, Mr. Green, Mr. G. Wilson.

(Section) 6. Brass Ensembles. Autumn, Winter, and Spring Quarters. Mr. Stoll, Mr. Kearns.

(Section) 7. Miscellaneous Ensembles. Autumn, Winter, and Spring Quarters. Music staff.

For course in the Psychology of Music, see the Department of Psychology, course 667.

For course in the Acoustics for Students of Music, see the Department of Physics, course 645.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

NAVAL SCIENCE

NAVAL RESERVE OFFICERS TRAINING CORPS

Office, The Armory

CAPTAIN J. A. JORDAN, U.S.N. AND STAFF

Regular and Contract NROTC Students normally take Naval Science courses during four consecutive years.

The sequence of courses is the same for all officer candidate students for the first two years. At the end of the second year, officer candidate students have the option of selecting specialization in Supply or Marine specialties, in which case, there is a variation in course selection during the final years.

In the case of the Contract Program, the student is unsubsidized except for uniforms and an allowance of \$27 per month in the junior and senior years. Students interested in this program should make application to the Professor of Naval Science prior to the closing of Autumn registration. These students are required to participate in only one Summer cruise activity. They are commissioned in the Reserve upon graduation, but serve only two years on active duty with the Navy.

Students entering the Regular NROTC Program are pre-selected through nation-wide com-

* Not given in 1956-1957.

petitive examination in December of the previous year. They become candidates for Regular commissions in the Navy or Marine Corps and receive a four-year scholarship. These students also participate in three summer activities, two of which are cruises at sea in ships of the Navy and the third is a field trip to amphibious and aviation bases. Upon graduation and commission, they serve three years on active duty.

During their senior year, Regular and Contract NROTC students may apply for flight training upon commissioning.

Students from high school and colleges who are qualified may apply for either program.

Any student may enroll in a Naval Science course on approval of the Professor of Naval Science.

Normal sequence of courses is as follows:

First Year: All officer candidates—441, 442, 443

Second Year: All officer candidates—541, 542, 543

Third Year: Line candidates—641, 642, 643

Marine candidates—651, 652, 653

Supply candidates—661, 662, 663

Fourth Year: Line candidates—743, 744, 745

Marine candidates—751, 752, 753

Supply candidates—761, 762, 743

441. Naval History. Three credit hours. Autumn Quarter. Three recitations and two one-hour laboratory periods each week.

The study of Naval history with particular emphasis on the principles of war and influence of sea power upon history prior to World War II.

442. Naval History and Orientation. Three credit hours. Winter Quarter. Three recitations and two one-hour laboratory periods each week.

A continuation of NS 441 covering the period through World War II; orientation covering customs, discipline, organization, and vessels of the U. S. Navy.

443. Naval Orientation. Three credit hours. Spring Quarter. Three recitations and two one-hour laboratory periods each week.

A continuation of NS 442. Naval orientation covering operations, seamanship, communications, and tactics. Indoctrination for summer cruise.

541. Naval Weapons, Part I. Three credit hours. Autumn Quarter. Three recitations and two one-hour laboratory periods each week.

A broad study of Naval armament and ammunition with particular emphasis given to dual purpose weapons. Principles of micro-wave transmissions and reception as applied to detection, identification, and location of surface craft and aircraft. Introduction to fire control.

542. Naval Weapons, Part II. Three credit hours. Winter Quarter. Three recitations and two one-hour laboratory periods each week.

Analysis of the elements of both surface and anti-aircraft problems in the control of gunfire, together with the basic mechanism used in fire control equipment and their assembly into systems, and the use of these systems. Analysis of the elements of battery alignment and the principles of gunnery doctrine.

543. Naval Weapons, Part III. Three credit hours. Spring Quarter. Three recitations and two one-hour laboratory periods each week.

Organization and functions of the Combat Information Center in tactical, gunnery, and control evolutions, with particular emphasis on coordination. Principles of underwater sound with application in anti-submarine warfare. A broad study of rockets, mines, and guided missiles.

641. Naval Engineering. Three credit hours. Autumn Quarter. Three recitations and two one-hour laboratory periods each week.

Broad general concept of the fundamental theory behind the construction and operation of a typical modern naval engineering installation. Relation of the elements of the installation one to another.

642. Naval Engineering and Introduction to Navigation. Three credit hours. Winter Quarter. Three recitations and two one-hour laboratory periods each week.

Basic theory of the construction and operation of the Diesel engine. Principles of ship stability and buoyancy in the practice of damage control. The combination of dead reckoning and piloting.

643. Navigation. Three credit hours. Spring Quarter. Three recitations and two one-hour laboratory periods each week.

Basic and advanced celestial navigation; celestial methods in solution of navigational problems.

651. Evolution of the Art of War. Three credit hours. Autumn Quarter. Three recitations and two one-hour laboratory periods each week. For candidates for commission in the U. S. Marine Corps only.

A survey of the historical development of weapons, tactics, and material, and an illustration of the classic principles of war by a study of selected battles and campaigns from Alexander to Appomattox.

652. Evolution of the Art of War and Basic Strategy and Tactics, Part I. Three credit hours. Winter Quarter. Three recitations and two one-hour laboratory periods each week. For candidates for commission in the U. S. Marine Corps only.

A continuation of the evolution of the art of war from Appomattox to present time.

653. Basic Strategy and Tactics, Part II. Three credit hours. Spring Quarter. Three recitations and two one-hour laboratory periods each week. For candidates for commission in the U. S. Marine Corps only.

A survey of modern strategical and tactical principles, using contemporary historical events as illustrative material.

661. The Supply Corps, Naval Finance, and Basic Naval Accounting. Three credit hours. Autumn Quarter. Three recitations and two one-hour laboratory periods each week. For candidates for a commission in the Supply Corps only.

Introduction to the Supply Corps, Naval finance including property, appropriation and cost accounting, and the Naval non-industrial accounting system ashore.

662. Advanced Naval Accounting, the Supply System, and Basic Supply Afloat. Three credit hours. Winter Quarter. Three recitations and two one-hour laboratory periods each week. For candidates for a commission in the Supply Corps only.

Further study of the Naval non-industrial accounting system ashore including the Naval industrial accounting system, the Navy Supply Plan, and the supply and logistic commands, organization, and activities afloat.

663. Intermediate Supply Afloat. Three credit hours. Spring Quarter. Three recitations and two one-hour laboratory periods each week. For candidates for a commission in the Supply Corps only.

A study of material identification, classification, procurement, receipt and expenditure afloat, and the related accounting record and reports.

743. Naval Administration. Three credit hours. Spring Quarter. Three recitations and two one-hour laboratory periods each week.

Uniform code of military justice. The psychology of human relations, and techniques of leadership; career planning.

744. Naval Operations. Three credit hours. Autumn Quarter. Three recitations and two one-hour laboratory periods each week.

To acquaint the student with those responsibilities which will face him in shipboard operations, such as meteorology, relative motion, tactical communications and instructions, and rules of the nautical road.

745. Naval Operations and Introduction to Naval Administration. Three credit hours. Winter Quarter. Three recitations and two one-hour laboratory periods each week.

A study of shipboard communications as a part of the Operations Department. A study of problems of administration and organization encountered aboard ship.

751. Amphibious Warfare Part I. Three credit hours. Autumn Quarter. Three recitations and two one-hour laboratory periods each week. For candidates for commission in the U. S. Marine Corps only.

A brief history of amphibious warfare and its development; a study of the principles of amphibious warfare technique.

752. Amphibious Warfare Part II. Three credit hours. Winter Quarter. Three recitations and two one-hour laboratory periods each week. For candidates for commission in the U. S. Marine Corps only.

A continuation of the study of the principles of amphibious warfare techniques and an examination of the application of these principles in selected examples of modern history.

753. Leadership, Uniform Code of Military Justice. Three credit hours. Spring Quarter. Three recitations and two one-hour laboratory periods each week. For candidates for commission in the U. S. Marine Corps only.

The psychology of human relations and techniques of leadership as applied by Marine leader; Uniform Code of Military Justice; career planning.

761. Advanced Supply Afloat and Basic Ship's Store. Three credit hours. Autumn Quarter. Three recitations and two one-hour laboratory periods each week. Prerequisite, Naval Science 661, 662, and 663. For candidates for a commission in the Supply Corps only.

A continuation of the study of supply afloat including the naval accounting system afloat and the procurement, receipt, storage, stock control and distribution system afloat plus the introduction to a study of running a ship's store afloat.

762. Advanced Ship's Store, Commissary, and Clothing and Small Stores. Three credit hours. Winter Quarter. Three recitations and two one-hour laboratory periods each week. Prerequisite, Naval Science 661, 662, 663, and 761. For candidates for a commission in the Supply Corps only.

A continuation of the study of ship's stores afloat. A study of ship's store, commissary, and clothing supply and accounting organization, functions, and techniques and a study of the related accounting reports.

OCCUPATIONAL THERAPY

Office, 187-189 University Hospital

ASSOCIATE PROFESSOR LOCHER, MRS. MATHIOTT

500. Survey of Occupational Therapy. One credit hour. One Quarter. Autumn and Winter. Miss Locher.

The development of occupational therapy and a survey of its present day trends and applications, including assigned preclinical observations and supervised participation in occupational therapy departments of the Ohio State University Health Center.

This course is open to students in such allied fields as social service and nursing.

The following courses are open only to students registered in the Department of Occupational Therapy.

501. Departmental Organization. One credit hour. Spring Quarter.

The relationship of occupational therapy to the total organization of the institution and to the community. A study of program planning and treatment methods common to all types of illnesses and disabilities. Equipment, supplies, and records needed for specific types of treatments. Hospital ethics and etiquette.

602. Occupational Therapy. Five credit hours. Autumn Quarter. Prerequisite, Anatomy 505 and Physiology 506. Miss Locher and visiting physicians.

Medical information, discussion and demonstration correlated with theory of treatment through activity for general medical and surgical conditions, including cardiac and the tuberculous. An understanding of the problems found in working with various age groups with emphasis on disabilities such as blindness and deafness.

Not open for graduate credit.

603. Occupational Therapy. Five credit hours. Winter Quarter. Prerequisite, Anatomy 505, Physiology 506 and Physical Education 570 or permission of the instructor. Instructor and orthopedists and neurologists.

Medical information, discussion and demonstration regarding neurological and orthopedic conditions correlated with principles and methods of treatment through activity in cases of loss of muscle power and limitation of joint motion.

Not open for graduate credit.

604. Occupational Therapy. Five credit hours. Spring Quarter. Pre-requisite, Psychology 541. Miss Locher and Mr. Todd.

Medical information, discussion and demonstration related to the study of problems encountered with neuropsychiatric and mentally deficient patients. The role of activity in the total treatment program. Job analysis as it applies to patients in hospital industries.

Not open for graduate credit.

605. Occupational Therapy. Two credit hours. Autumn Quarter. Pre-requisite, Physiology 506 or permission of the instructor.

Principles and methods of treatment in cases of lack of coordination and loss of a part. Adaption of equipment to meet the needs of the individual.

Not open for graduate credit.

Not open to students who have credit for Occupational Therapy 505.

620. Clinical Practice in Occupational Therapy. Six credit hours. All Quarters. By special arrangement with the Chairman of the Department of Occupational Therapy. Prerequisite for this course is an average point-hour ratio of 2.25 on all professional courses.

Initial registration in this course should come in the summer following completion of the ninth Quarter of the professional program and may be for one term or the Quarter.

This course provides practical experience in application of the principles of occupational therapy under the direction of the University Department of Occupational Therapy and the immediate supervision of registered therapists in affiliated hospitals. Students attend hospital lectures, conferences, and clinics during this period.

Not open for graduate credit.

Not open to students who have credit for Occupational Therapy 520.

PHARMACY

Office, 104 Pharmacy and Bacteriology Building

PROFESSORS CHRISTENSEN AND NELSON, ASSISTANT PROFESSOR TYE

708-709. Materia Medica. Five credit hours each Quarter. 708, Autumn and Winter; 709, Winter and Spring. Four lectures and one three-hour laboratory period each week. Prerequisite, Pharmacy 607. Mr. Nelson, Mr. Tye.

Lecture, recitation, and laboratory courses covering the fundamental facts in Material Medica and including a discussion of the more commonly used drugs and preparations with a brief discussion of their pharmacology and therapeutic applications.

Open for graduate credit.

PHILOSOPHY

Office, 10 University Hall

PROFESSOR NELSON, AVEY, EVANS, AND WEITZ, ASSOCIATE PROFESSORS HARTMAN AND HINSHAW, ASSISTANT PROFESSORS REITHER, FOX, DONEY, AND NEMETZ, MR. HARRIS, MR. KRETZMANN, MR. MINAS, AND ASSISTANTS

RECOMMENDATIONS TO STUDENTS PLANNING A MAJOR IN PHILOSOPHY

1. Students considering a major in philosophy should consult a member of the Department as early as possible, so that a sequence of related courses may be carefully planned.

2. Students concentrating in philosophy are required to take either 401 or 405 or 510, and 402, 601, 602, 603. By special permission of the Department, 400 may be substituted for 401. Those looking forward to graduate work in the field should lay as much stress upon securing a sound general culture and scientific training as upon the special work of this department.

400. Types of Philosophy. Three credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Staff.

An elementary study of the essentials of the various types of philosophy which have been influential in world literatures, history, and science: Naturalism, Pragmatism, Dualism, Idealism, Mysticism.

Not open to students who have credit for Philosophy 401.

401. Introduction to Philosophy. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Staff.

The meaning and scope of philosophy, its typical problems and theories, its relations to the special sciences and to morality and religion.

Not open to students who have credit for Philosophy 400.

402. Introduction to Logic. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Staff.

Deductive and inductive logic; conditions of clear statement and valid reasoning; propositions, contradiction, definition, inference, types of argument, detection and avoidance of fallacies; the methods by which theories and laws are established in the sciences.

405. Introduction to Ethics. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Staff.

An examination of the theoretical grounds for moral judgments. The course concerns itself with questions such as the ultimate nature of right and wrong, good and evil, and suggests tools for the development of adequate criteria for moral values.

***406. Religious Questions.** Three credit hours. Winter Quarter. No prerequisite.

An elementary non-sectarian study of the nature and significance of religion; an examination of the individual and social bases of religious experiences.

510. Introduction to Social Ethics. Five credit hours. Winter Quarter. Mr. Hartman.

Selected issues in ethical theory and their bearing on the problem of the nature of a good social order and of right and social action. The rival ideals of aristocracy, fascism, communism, and democracy.

Not open to students who have credit for Philosophy 656.

515. Esthetics. Five credit hours. Winter Quarter. For Sophomores, Juniors, and Seniors. Prerequisite, one course in philosophy or fifteen hours in fine arts or music. Mr. Weitz.

The principal systems of esthetics; interpretations of the creative activity of the artist, the work of art, and the contemplation and criticism of art objects.

516. Philosophy of Human Nature. Three credit hours. Autumn Quarter. For Sophomore, Juniors, and Seniors. No prerequisite. Mr. Reither.

An introduction to the philosophy of man, its foundation in life and culture; the problems of values and standards; the various theories of human nature-dualism, materialism, spiritualism. The relation of humanistic philosophy to social philosophy and to the philosophies of history and religion.

***517. Philosophy of the Far East.** Three credit hours. Autumn Quarter. Prerequisite, one course in philosophy.

A survey of the chief philosophical conceptions and attitudes of India, China, and Japan and their influence upon the life and culture of these nations.

Not open to students who have credit for Philosophy 617.

***520. Philosophy of the Near East.** Three credit hours. Autumn Quarter. Prerequisite, one course in philosophy.

A survey of the chief philosophical concepts and attitudes of Egypt, Palestine, and Arabia, including Judaism, Early Christianity, and Islam. Their influence upon the life and culture of these nations and their contributions to later history.

Not open to students who have credit for Philosophy 620.

551. Points of View in Ancient Philosophy. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, junior standing. Staff.

A study, by readings in the sources of the central points of view of Plato and Aristotle, for the purpose of aiding the student to reflect upon problems in the light of principles and logical relationships.

Not open to majors in philosophy.

552. Points of View in Modern Philosophy. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, junior standing. Staff.

A study, by readings in the sources of the central points of view of two major philosophers, such as Locke and Kant, for the purpose of cultivating in the student a capacity to approach problems from the standpoints of philosophical analysis and interpretation.

Not open to majors in philosophy.

* Not given in 1956-1957.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen. Sophomores with a cumulative point hour of 3.0 or higher and with the permission of the Dean, may take these courses.

NOTE: Unless otherwise specified, the prerequisite to Philosophy courses in the "600" group is either (a) ten hours in philosophy and ten hours in natural or social science, or (b) fifteen hours in natural science and fifteen hours in social science.

601. History of Ancient Philosophy. Five credit hours. Autumn Quarter.

Mr. Fox.

The development of philosophical thought in ancient Greece. Special attention is given to the pre-Socratics, Plato, Aristotle, Stoicism, Epicureanism, Neo-Platonism.

Not open to students who have credit for Philosophy 501.

602. History of Philosophy from Augustine to Hume. Five credit hours.

Winter Quarter. Mr. Kretzmann.

The development of European philosophy from the fourth to the eighteenth centuries. The medieval period is dealt with briefly in a number of lectures. Special attention is given to Descartes, Spinoza, Leibniz, Locke, Berkeley, and Hume.

Not open to students who have credit for Philosophy 502.

603. History of Philosophy from Kant through the Nineteenth Century.

Five credit hours. Spring Quarter. Mr. Kretzmann.

The development of European philosophy. Special attention is given to Kant, Fichte, Hegel, Schopenhauer, Nietzsche, and the Utilitarians.

Not open to student who have credit for Philosophy 503.

604. Philosophy since 1900. Five credit hours. Autumn Quarter.

Prerequisite, ten hours of philosophy. Mr. Doney.

The development of European and American philosophy during the twentieth century.

***606. American Philosophy to 1900. Three credit hours. Autumn Quarter.**

Prerequisite, ten hours of philosophy.

A comprehensive and critical study of Puritanism, Deism, and Transcendentalism.

Not open to students who have credit for Philosophy 506.

***607. American Philosophy Since 1900. Three credit hours. Autumn Quarter.**

Prerequisite, Philosophy 401 or 502 or 602, and any other five hours of credit in philosophy.

The pragmatic philosophies of James and Dewey will be studied in detail. The revolt against idealism, recent scientific methodology, and the leading ideas of Santayana, Whitehead and other contemporary American philosophers will be examined.

Not open to students who have credit for Philosophy 507.

609. Mediaeval Philosophy. Four credit hours. Spring Quarter. Pre-

requisite, ten hours of philosophy including 501, or 638 and 629. Mr. Nemetz.

An examination of the main trends in the thought of the middle ages, based on a study of characteristic works of some of the most important mediaeval philosophers.

Not open to students who have credit for English 618.

618. Philosophy in Literature. Five credit hours. Autumn Quarter. Mr.

Weitz.

A study of the philosophical problems confronting man as reflected in selected classics of world literature, such as the Greek dramatists; Shakespeare; Dostoevsky; Voltaire, T. S. Elliot; Proust.

***630. Philosophy of Augustine. Three credit hours. Spring Quarter. Pre-**

requisite, ten hours of philosophy, including Philosophy 501 or 601. Mr. Nemetz.

An examination of the doctrines which formed the basis of a tradition in medieval thought; particular attention is given to the theory of knowledge, the foundations of ethics and the divisions of philosophy.

***631. Philosophy of Aquinas. Three credit hours. Spring Quarter. Pre-**

requisite, ten hours of philosophy, including 501 or 601.

* Not given in 1966-1967.

Analysis of the treatises on the existence of God, the nature of man, and law; consideration of Aristotelian influence in medieval controversies.

***632. Philosophy of Scotus and Occam.** Three credit hours. Prerequisite, ten hours of philosophy, including Philosophy 501 or 601.

Consideration of the Metaphysics of Scotus and the Logic of Occam as opposed developments within the Augustinian tradition; transition to the philosophy of the Renaissance.

633. Philosophy of Locke and Berkeley. Three credit hours. Spring Quarter. Prerequisite, ten hours of philosophy, including Philosophy 502 or 602. Mr. Reither.

An intensive study of the philosophy of Locke and Berkeley based on a careful reading of selected works.

634. Philosophy of Hume. Three credit hours. Spring Quarter. Prerequisite, ten hours of philosophy, including 502 or 602. Mr. Fox.

An intensive study of the philosophy of Hume based on a careful reading of selected works.

635. Philosophy of Descartes. Three credit hours. Spring Quarter. Prerequisite, ten hours of philosophy, including Philosophy 502 or 602. Mr. Doney.

An intensive study of the philosophy of Descartes based on a careful reading of selected works.

***636. Philosophy of Spinoza.** Three credit hours. Autumn Quarter. Prerequisite, ten hours of Philosophy, including Philosophy 502 or 602.

An intensive study of the philosophy of Spinoza based on a careful reading of selected works.

***637. Philosophy of Leibnitz.** Three credit hours. Winter Quarter. Prerequisite, ten hours of philosophy, including Philosophy 502 or 602.

An intensive study of the philosophy of Leibnitz based on a careful reading of selected works.

638. Philosophy of Plato. Five credit hours. Autumn Quarter. Prerequisite, ten hours of philosophy, including Philosophy 501 or 601. Mr. Fox.

An intensive study of the philosophy of Plato based on a careful reading of selected works.

639. Philosophy of Aristotle. Five credit hours. Winter Quarter. Prerequisite, ten hours of philosophy, including Philosophy 501 or 601. Mr. Nemetz.

An intensive study of the philosophy of Aristotle based on a careful reading of selected works.

640. Post-Kantian German Idealism. Three credit hours. Autumn Quarter. Prerequisite, ten hours of philosophy, including Philosophy 503 or 603.

A study of German Philosophy after Kant as presented in selected writings of such thinkers as Fichte, Schelling, Hegel and Schopenhauer.

641. Philosophy of Bradley and Royce. Three credit hours. Spring Quarter. Prerequisite, ten hours of philosophy. Mr. Evans.

An intensive study of the philosophies of Bradley and Royce based on a careful reading of selected works.

***642. Philosophy of James and Dewey.** Three credit hours. Winter Quarter. Prerequisite, ten hours of philosophy.

An intensive study of the philosophies of James and Dewey based on a careful reading of selected works.

***643. Philosophy of Bergson and Whitehead.** Three credit hours. Autumn Quarter. Prerequisite, ten hours of philosophy.

An intensive study of the philosophies of Bergson and Whitehead based on a careful reading of selected works.

***644. Philosophy of Russell and Santayana.** Three credit hours. Autumn Quarter. Prerequisite, ten hours of philosophy.

An intensive study of the philosophies of Russell and Santayana based on a careful reading of selected works.

* Not given in 1956-1957.

***645. Existentialism.** Three credit hours. Spring Quarter. Prerequisite, ten hours of philosophy.

The origin and development of existentialist philosophy based on a study of such thinkers as Kierkegaard, Heidegger, Jaspers, Sartre, and Marcel.

649. Advanced Logic I. Four credit hours. Autumn Quarter. Prerequisite, Philosophy 402 or consent of the instructor. Mr. Minas.

Logic of propositions, logic of classes, predicate logic.

652. Philosophy of Science. Three credit hours. Winter Quarter. Prerequisite, five hours of philosophy and ten hours of science, or twenty hours of science. Mr. Hinshaw.

A study of the concepts and methods of science. The role of formal systems in the construction of theories. Methodological problems of particular sciences.

653. Philosophy of Religion. Five credit hours. Winter Quarter. Prerequisite, five hours of philosophy. Mr. Evans.

A systematic study of fundamental religious concepts and problems: The idea and nature of God, the idea and nature of man, their relation to the world and to the problems of human destiny.

654. Conceptions and Methods of the Social Sciences. Three credit hours. Spring Quarter. Prerequisite, ten hours of Philosophy and ten hours of social science. Mr. Wolff.

An appraisal of the social sciences and their methodological and philosophical implications through a survey of their development and of their divergent and convergent conceptions today. Lectures and discussions; student readings, reports, and papers.

***659. Introduction to the Geisteswissenschaften (Human Studies).** Five credit hours. Spring Quarter. Prerequisite, ten hours of philosophy and ten hours of social science.

A study of philosophical anthropology as developed by such writers as Dilthey and Simmel. Lectures and discussions; student readings, reports, and papers.

661. Theory of Knowledge. Three credit hours. Autumn Quarter. Prerequisite, ten hours of philosophy. Mr. Hinshaw.

A systematic study of major epistemological problems; the possibility, the origin, the foundations, the structure, the methods, the limits, the validity of knowledge.

663. Problems in Metaphysics. Three credit hours. Winter Quarter. Prerequisite, Philosophy 402 and 501, 502, 503, or 601, 602, 603 or consent of the instructor. Mr. Nelson.

Nature of existence; substance, causation, and law; pluralism and monism; universals; space and time.

664. Systems of Metaphysics. Three credit hours. Spring Quarter. Prerequisite, Philosophy 603 or consent of the instructor. Mr. Nelson.

Realism, naturalism, idealism, positivism.

***665. Philosophy of History.** Five credit hours. Spring Quarter. Prerequisite, ten hours in philosophy and ten hours in the social sciences.

A discussion of the place of history in the system of human knowledge, the philosophic significance of historical inquiry, and various theories of the nature and structure of historical process. Such writers as Plato, St. Augustine, Hegel, Marx, Spengler, and Toynbee will be considered.

666. Philosophy of Language. Five credit hours. Spring Quarter. Prerequisite, ten hours of philosophy, including 649 or 650. Mr. Weitz.

An inquiry into semantics and other dimensions of language analysis, the functions of language, the modes of meaning, the relation of linguistic structure to metaphysics.

***668. Philosophical Background of the Law.** Five credit hours. Autumn Quarter. Lectures, discussions, and reports. Mr. Hartman.

This course is intended to help students interested in law and related subjects, such as political science and economics, to understand those philosophical concepts and methods which

have influenced the thinking of lawyers, legislators, and judges. Attention will be given to the historical development of such concepts as justice, natural law, rights, and to such methods of thought as rationalism, authoritarianism, dialectic, historical explanation, pragmatism, etc.

Not open to students who have credit for Philosophy 530.

***671. Advanced Ethical Theory.** Four credit hours. Winter Quarter. Prerequisite, ten hours of philosophy, including Philosophy 405.

A systematic analysis of selected ethical theories.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate School.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHONETICS

(See Speech)

PHOTOGRAPHY

Office, 4 Brown Hall

PROFESSOR DAVIS, ASSOCIATE PROFESSOR WAGNER, ASSISTANT PROFESSOR BINAU

510. Application of Photographic Processes to Television. Three credit hours. Spring Quarter. Two lectures and two laboratory hours each week. Mr. Wagner.

A general course in the application of photographic processes to television with emphasis on motion picture production. Lectures, laboratories, and field trips on motion picture camera techniques as applied to television. Processing, editing, and sound recording in connection with films for television. Photographic problems in telecasting motion picture films. Preparation of still picture material for television transmission. Relationship of station film unit to other station activities.

511. Photography. Three credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and two two-hour laboratory periods each week. Not open to Freshmen. Mr. Binau.

Lectures and practice in the fundamentals of photographic processes. The use of the camera, characteristics of photographic emulsions, light filters and their uses, exposure problems, processing of negatives, contact printing, photographic optics, photographic chemistry.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

615. Motion Picture Photography. Three credit hours. Winter Quarter. Two lectures and one two-hour laboratory period each week. Prerequisite, Photography 510, or 511, or 625, by permission of the instructor. Mr. Wagner.

An advanced course in motion picture production, with special emphasis on the 16 mm field. The mechanics and principles of specialized motion picture cameras, film editing, photographic sound recording and reproduction, and production planning.

Not open to students who have credit for Photography 515.

625. Scientific Photography. Three credit hours. Autumn Quarter. Two lectures and recitations and two two-hour laboratory periods each week. Prerequisite, one year of Chemistry and/or one year of Physics. Mr. Davis, Mr. Binau.

This course is designed for students of physics, chemistry, astronomy, biology, and other sciences who need a knowledge of the principles and techniques of photography as an aid to their scientific work. Special attention is given to the nature of photographic processes, characteristics of photographic materials and the applications of photography to sciences. The laboratory exercises will be selected as far as possible to meet the needs of individual students.

650. Advanced Photography. Three credit hours. Winter Quarter. Two lectures and two two-hour laboratory periods each week. Prerequisite, Photography 511 or 625. Mr. Binau.

* Not given in 1956-1957.

A continuation of Photography 511 or 625, dealing mainly with projection printing, special effects, photo-engraving, lens testing, color photography, miniature camera work.

699. Minor Problems in Photography. Three to five credit hours. Autumn, Winter, and Spring Quarters. Conference, library, and laboratory work. Prerequisite, Photography 511, or 625, and 650, fifteen hours of chemistry and/or physics, and consent of the instructor. This course may be repeated until the student has accumulated not to exceed ten credit hours. Mr. Davis, Mr. Wagner, Mr. Binau.

This course is designed to permit a properly qualified student to avail himself of the library and laboratory facilities of the department for adding to his knowledge and techniques in some subject in photography and for carrying out minor investigations.

PHYSICAL EDUCATION

MEN'S DIVISION

Office, 124 Physical Education Building

PROFESSORS LARKINS, OBERTEUFFER, SNYDER, ASHBROOK, DANIELS, CUSHMAN, L. HESS, PEPPE, DUFFEE, STALEY, MOONEY, AND HAYES, ASSOCIATE PROFESSORS C. WIRTHWEIN, HIXSON, STAHL, KAROW, AND KOVACIC, ASSISTANT PROFESSORS BENNETT, BIGGS, H. WIRTHWEIN, KAPLAN, MONTONARO, STATEN, HEWLETT, FREDERICKS, T. W. TAYLOR, AND MAND, MR. SARKKINEN, MR. F. TAYLOR, MR. FEKETE, MR. STROBEL, MR. BEETHAM, MR. W. HESS, MR. KNUTTGEN, MR. RUSH, AND ASSISTANTS

WOMEN'S DIVISION

Office, 201 Pomerene Hall

PROFESSORS PALMER, ARMSTRONG, AND D. WIRTHWEIN, ASSOCIATE PROFESSORS MORDY, ALLENBAUGH, GILMAN, WATSON, AND STEIN, ASSISTANT PROFESSORS ALKIRE, HARDING, YOST, RUPERT, HAYS, CRAFTS, AND SCHROEDER, MRS. SOHL, MISS WEST, MISS HACKETT, MISS RITENOUR, MISS BOUSFIELD, MRS. RITCHESON, MISS GRAVES, MISS PARK, AND ASSISTANTS

Students in the College of Education may major in physical education. This course prepares students for all types of positions of leadership in the field of physical education, athletic coaching, dance, recreation, and school health education.

Students in the College of Education may take courses in physical education for minimum certification of credits not to exceed thirty Quarter-credit hours, in addition to the required courses, 400, 411-412-413, 414-415-416 (Men's Division), and 400, 421, 422, 423, 425, 426, 427 (Women's Division), on the approval of the Chairman of the Department of Physical Education and the Dean of the College of Education.

Juniors and Seniors not specializing in physical education may elect one or more courses in addition to the courses required of all students. In each case the approval of the Chairman of the Department and of the Dean of the College of Education is necessary. Students in the College of Agriculture, Arts and Sciences, Commerce and Administration, and Engineering wishing to take these courses must secure permission of the Deans of their respective Colleges and the Chairman of the Department of Physical Education.

NOTE: All students taking Physical Education as a teaching field or for minimum certification credit must secure the approval of the department adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by his signature on the Secretary's and Registrar's sections of the schedule card.

SERVICE COURSES

400. Hygiene (Men and Women). One credit hour. All Quarters. Men—One meeting each week. Women—Twelve class meetings each Quarter. Required of every Freshman unless Physical Education 410 is taken during the first year of residence in the University. Sections for men, Mr. Cushman; sections for women, Miss Armstrong.

This course deals with the factors which are significant in personal health. The emphasis is placed on student health problems as a basis for discussions.

NOTE: Students in the four-year curriculum in Physical Education will not take this course, but will take Physical Education 410 instead.

401-402-403. Physical Education (Men). One credit hour. All Quarters. Two hours each week. Required of every Freshman. Staff.

Opportunity in these courses is given to elect, from a large number of group and individual sports, and dance, one activity which will contribute to the organic development and the recreational life of the student. Instruction in the techniques of play, the rules and strategies and the social behaviors involved in each activity are given. Special instruction for the physically handicapped is available. All work in these courses is based on a physical examination given at the beginning of the entering Quarter.

These courses may not be counted toward a degree for Physical Education majors.

404. Physical Education (Men). No credit. All Quarters. Two hours each week. This course may be taken not to exceed three times.

A continuation of Physical Education 401-402-403.

421-422-423. Physical Education (Women). One credit hour. All Quarters. Two hours each week. Required of every Freshman. Staff.

Opportunity in these courses is given to elect, from a large number of group and individual sports, and dance, one activity which will contribute to the organic development and the recreational life of the student. Instruction in the techniques of play, the rules and strategies and the social behaviors involved in each activity are given. Special instruction for the physically handicapped is available. All work in these courses is based on a physical examination given at the beginning of each year.

These courses may not be counted toward a degree for Physical Education majors.

425-426-427. Physical Education (Women). One credit hour. All Quarters. Three hours each week. Required of all Sophomores. Staff.

A continuation of Physical Education 421-422-423.

These courses may not be counted toward a degree for Physical Education majors.

ELECTIVE COURSES FOR MEN DISQUALIFIED FOR MILITARY AND AIR SCIENCE

525-525-527. Physical Education. One credit hour. All Quarters. Three hours each week. Open to Freshmen disqualified for elementary courses in Military and Air Science. Staff.

These courses are similar in content to Physical Education 401-402-403.

528-529-530. Physical Education. One credit hour. All Quarters. Three hours each week. Open to Sophomores disqualified for elementary courses in Military or Air Science. Staff.

These courses offer advanced training and instruction in various athletic sports.

PROFESSIONAL COURSES

410. Hygiene (Men and Women). Five credit hours. Section for Men. Autumn and Spring Quarters. Section for Women, Spring Quarter. Five lectures each week. Must be taken by students in the Physical Education curriculum, and may be elected by others, instead of Physical Education 400. Section for men, Mr. Cushman.

The course aims to establish a basis for positive health and efficiency through a consideration of the various conditions and factors which affect health.

411-412-413. Physical Education Activities (Men and Women). One credit hour each Quarter. 411, Autumn Quarter; 412, Winter Quarter; 413, Spring Quarter. Five lecture laboratory hours each week. Required of all men and women students who elect physical education as a major. If the student does not achieve a certain level of proficiency, he will be required to repeat the course without further credit. Under certain conditions and with the consent of the Department these courses may be elected by a few other students in place of Physical Education 401, 402, and 403 for men, or Physical Education 421, 422, and 423 for women. Staff.

The objectives of these courses is to develop knowledge, understanding, and skill appropriate to physical education teachers.

414-415-416. Physical Education Activities (Men and Women). Two credit

hours each Quarter. 414, Autumn Quarter; 415, Winter Quarter; 416, Spring Quarter. Ten lecture laboratory hours each week. Required of all men and women students majoring in physical education. This requirement must be fulfilled by these students before they may proceed to the professional courses in the junior and senior years. Staff.

A continuation of Physical Education 411-412-413.

NOTE: The following courses in Physical Education are open to students in the College of Education. Students in the Colleges of Agriculture, Arts and Sciences, Commerce and Administration, and Engineering wishing to take these courses must secure permission of an adviser in the Physical Education Department.

443. The Teaching of Track and Field (Men). Two credit hours. Winter Quarter. Two two-hour lecture laboratory periods each week. Permission of departmental adviser.

Study in the theory, method, and mechanics of coaching track and field events.

446. The Teaching of Football (Men). Three credit hours. Winter Quarter. Two lectures and three laboratory periods each week. Prerequisite, satisfactory evidence of skill in football playing and permission of the departmental adviser. Mr. Hayes.

Study in the strategy and mechanics of directing football, including a consideration of football rules, football fundamentals, individual and team play, offensive and defensive formations, organization and practice periods and educational values of sports.

447. The Teaching of Baseball (Men). Two credit hours. Winter Quarter. Two two-hour lecture laboratory periods each week. Permission of departmental adviser. Mr. Karow.

Study in the theory, strategy, and mechanics of coaching baseball, including batting, baserunning, and the playing of all positions.

449. The Teaching of Basketball (Men). Three credit hours. Autumn Quarter. Three lectures and one laboratory period each week. Prerequisite, permission of departmental adviser. Mr. Stahl.

Study in the theory, strategy, and mechanics of directing basketball, including various systems of offense and defense and team play, passing, goal throwing, dribbling, pivoting, organization of practice periods, judgment and psychology in handling of men.

***462. Advanced Folk Dancing (Men and Women).** Two credit hours. Prerequisite, Physical Education 460 or equivalent.

A continuation of Physical Education 460 with special emphasis on folk dances that will facilitate the transition from folk dancing to the dance as an art form.

***469. Group Games for Boys (Men).** Two credit hours.

Participation and leadership experience in a large variety of individual, dual, group and team games suitable for elementary, junior high school, senior high school, playground and community centers. Special emphasis will be placed on program planning and leadership techniques.

473. First Aid (Men and Women). One credit hour. One Quarter. Autumn, Winter, Spring. Two lecture-laboratory meetings each week. Staff.

First aid to the injured in the home, school, and community. A consideration of first-aid practices with laboratory experience as well as lecture and discussion opportunities. Successful completion of this course leads to the Red Cross standard or advanced certificate in first aid.

476. Creative Physical Education for Elementary Teachers (Men and Women). Three credit hours. One Quarter. Autumn, Winter, Spring. One lecture and four laboratory periods each week. Not open to Freshmen. Miss Allenbaugh and staff.

A course presenting the theory of physical activities as a medium of creative self-expression. Rhythmic expression, folk dancing, dramatization, plays and games suitable for the elementary school will be taught. The relation of music to the dance, and practice in creating simple dance themes will be included.

***477. The Teaching of Golf (Men and Women).** One credit hour. Spring Quarter. Prerequisite, satisfactory evidence of skill in the playing of golf.

Consideration of the methods of teaching golf developed through practice in the activity.

* Not given in 1956-1957.

***482. Supervision of Playground and Community Recreation Activities (Men and Women). Two credit hours.**

Discussion and planning of recreation programs in relation to community needs. Participation in handicrafts, nature study, individual and group activities and opportunity for planning and conducting playground and community programs.

520. Sports Officiating—Football (Men). Two credit hours. Autumn Quarter. Four lecture-laboratory periods each week. Elective. Prerequisite, open to physical education majors and to others upon permission of department advisers.

This course will include lectures, readings, class discussions, and field experience in the officiating of school and college football games. Discussions and interpretations of rules, administration, and conduct of all elements to be found within football.

521. Sports Officiating—Basketball (Men and Women). Two credit hours. Winter Quarter. Section for Men. Section for Women. Four lecture-laboratory periods each week. Elective. Prerequisite, open to physical education majors and others upon permission of department adviser. Section for men, Mr. Hixson; Section for women, Miss Crafts.

This course will include lectures, readings, class discussions, and field experience in the officiating of school and college basketball games. Discussions and interpretations of rules, administration, and conduct of all elements to be found within basketball.

522. Sports Officiating—Hockey and Volleyball (Women). Two credit hours. Autumn Quarter. Four lecture-laboratory periods each week. Elective. Prerequisite, open to physical education majors and to others upon permission of department adviser.

This course will include: lectures, readings, class discussion, field experience in officiating. Interpretations of rules, administration, and conduct of hockey and volleyball for women.

540. The Administration of Interschool Athletics (Men and Women). Two credit hours. Spring Quarter. Two lecture periods each week. Mr. Hixson.

An introductory course in athletic administration including such problems as: scheduling contests; keeping records; making and administering eligibility rules; conducting meets and contests; administering plant and equipments; handling finances; making awards.

Not open to students who have credit for Physical Education 440.

541. Theory and Practice of Physical Education (Women). Three credit hours. Autumn Quarter. Six lecture-laboratory periods each week. Miss Allenbaugh, Miss Watson.

The course focuses upon the child, and ways in which physical activities contribute to total development. Through an understanding of the child's characteristics and needs, from infancy through late childhood, students learn to adapt materials and methods to groups of children, and to encourage the expression of original ideas in many dance patterns.

542. Theory and Practice of Physical Education (Women). Four credit hours. Winter Quarter. Four lectures and three laboratory periods each week. Prerequisite, Physical Education 541. Miss Allenbaugh, Miss Watson.

An exploration of the physical education activities which will aid in the accomplishment of the child's developmental tasks during his transition from childhood into adolescence. Further exploration of complex dance forms, with opportunity for creative use. Opportunity to assume teaching responsibilities for children in a laboratory situation.

543. Theory and Practice of Physical Education (Women). Three credit hours. Spring Quarter. Six lecture-laboratory periods each week. Prerequisite, Physical Education 541. Miss Allenbaugh, Miss Watson.

A study of the child, his activity needs and responses in a play situation. The students explore, plan and experiment with playground activities which can help the child discover new areas of satisfying activity. Opportunity to explore, interpret and execute European and American folk dances.

545. The Teaching of Physical Education (Women). Three credit hours. Autumn Quarter. One lecture and four laboratory periods each week. Prerequisite, Physical Education 543 and satisfactory proficiency in Physical Education 411-416 inclusive, or the equivalent. Miss Crafts.

* Not given in 1956-1957.

Emphasis is placed upon understanding the characteristics of the adolescent girl and the way certain group and individual sports contribute to her optimal development. Opportunities to observe and to teach are provided.

549. The Teaching of Swimming (Men and Women). Two credit hours. Section for Men, Spring Quarter. Four lecture-laboratory periods each week. Section for Women, Spring Quarter. Two lectures and two laboratory periods each week. Prerequisite, permission of the department adviser upon satisfactory evidence of skill in swimming. Mr. Peppe, Mr. C. Wirthwein.

Organization of water front activities in schools, camps, and recreation centers. Methods of teaching swimming, life saving, and canoeing. Special attention will be given to the selection of material used in elementary and secondary schools and colleges.

550. Theory and Practice of Recreational Dance. (Men and Women). Three credit hours. Spring Quarter. Two lectures and four laboratory periods each week. Prerequisite, Physical Education 543 or permission of the department adviser upon satisfactory evidence of knowledge and skill in dance. Miss Alkire.

Lectures, discussions, and readings dealing with the objectives and methods of teaching and directing recreational forms of dance. Organization and planning of dance units in the school curriculum. Experience in teaching social, tap, folk, and American country dances.

551. Directed Teaching Experience in Physical Education (Men and Women). Two credit hours. Each Quarter. Autumn, Winter, Spring. This course may be repeated until six credit hours have been earned. Three laboratory periods each week. Prerequisite, permission of department adviser. Staff.

Opportunity for more advanced work in sports technique, assignment of teaching projects in college classes. Students are required to teach (under supervision) one Physical Education activity class during the junior or senior year.

560. Camp Counseling (Men and Women). Three credit hours. Spring Quarter. Four lecture-laboratory periods each week. Elective. No prerequisite. Miss Crafts.

An elementary course for students in any college interested in summer camp positions. Discussion of types of camps, objectives, principles and practice in program making, conduct of activities, evaluation, description of camp programs and policies, health and safety problems, camper guidance, and special events.

570. Kinesiology and Therapeutic Exercises. Four credit hours. Autumn Quarter. Four lecture periods each week. Limited to students of Occupational Therapy. Prerequisite, anatomy and physiology. Miss Gilman, Miss Stein.

A study of the range, quality and capacities of movement of the human body. Special consideration will be given to the problems of the physically handicapped including analyses of movements involving muscle reeducation. Special reference will be given to therapeutic exercises.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

General Prerequisites for Courses Numbered from 600 to 799. For all courses in this group, the prerequisite is at least junior standing and twenty Quarter-hours in Physical Education and allied subjects of which a minimum of at least ten Quarter-hours must be in Physical Education; or thirty Quarter-hours in not more than two allied subjects.

†601. Principles of Football Coaching and Management (Men). Three credit hours. Prerequisite, coaching experience.

A course for advanced students of football. The course will consider the principles underlying various types of football strategy, the designing of plays, methods of teaching and controlling players; also, special problems of management, such as those connected with selecting, handling equipment, and making trips.

609 and 610. See School Health Education following Physical Education.

615. Problems in Intramural Sports (Men and Women). Two credit hours. Spring Quarter. One two-hour meeting each week. Mr. Staley.

A critical analysis of intramural sports programs with a view to their justification from

† Not given during the academic year, 1956-1957.

the standpoint of objectives, age level and contribution to the general welfare of the students participating. Problems of policy and administration of programs on the elementary, secondary, and college levels will be studied. Lectures, readings, reports, and discussions.

621. Principles of Physical Education (Men and Women). Five credit hours. One Quarter. Autumn and Spring. Prerequisite, open to Physical education majors and others upon permission of the department adviser. Mr. Oberteuffer.

A study of the origins and nature of modern physical education as a developmental experience, and as a medium for education. The contribution of physical education to organic growth and development, to the development of personal resources and growth in social relationships. Relationships of principles of physical education to administration and to curriculum formation.

625. Evaluation in Physical Education (Men and Women). Three credit hours. Winter Quarter. Two lectures and one two-hour laboratory period each week. Mr. Ashbrook.

A critical study of ways and means of evaluating biological, social and psychological outcomes of programs of physical education. Analyses of various specific tests and standards to use in school will be made.

630. Adapted Physical Education (Men and Women). Five credit hours. One Quarter. Section for men, Autumn; section for women, Spring. Eight lecture-laboratory hours each week. Prerequisite, Physical Education 691 or equivalent. Sections of men, Mr. Daniels; section for women, Miss Gilman.

A basic course in the organization and administration of individual physical education programs for typical students or students with special problems. Laboratory experience in the application of sports therapy, swimming therapy and special conditioning exercises will be arranged. Discussion of individual programs of physical education for the most prevalent types of disabilities found in school and college population.

631. Dance in the Modern Period (Men and Women). Three credit hours. Winter Quarter. One lecture and four laboratory periods each week. Prerequisite, Physical Education 550 or the equivalent. Miss Alkire.

Analysis of teaching procedures with study and practice in directing dance as a creative expression. Readings and discussions concerning the development of dance in education.

632. Dance Composition (Men and Women). Three credit hours. Spring Quarter. Three laboratory periods each week. Prerequisite, permission of the department adviser upon satisfactory evidence of knowledge and skill in dance. Miss Alkire.

Experience and guidance in creating artistic dance forms. Study of dance as it is applicable to other arts with emphasis on its particular relationship to music and other forms of accompaniment. Supplementary readings, and discussions.

***633. Dance Production (Men and Women).** Five credit hours. Fifteen lecture-laboratory hours each week. Prerequisite, Physical Education 631 and 632 or the equivalent and permission of the instructor.

A directed experience in dance as a communicative art expression to be culminated in a theater production.

Not open for graduate credit.

***634. Current Problems in Dance Education (Men and Women).** Three credit hours. Five lectures and one conference hour each week. Prerequisite, at least one year's experience as a teacher, Physical Education 621 or the equivalent and permission of the instructor.

A discussion of the problems encountered by the high school and college dance teacher relating to dance accompaniment, creative activity, dance production, dance as communicative force and dance as a recreation. Other problems to be considered as selected by the students.

635. Current Problems in Physical Education for Girls and Women (Men and Women). Three credit hours. Spring Quarter. Prerequisite, experience in teaching in schools or college. Miss Palmer.

A consideration of the problems of teachers of physical education, including public relations, legal responsibilities, finances, interscholastic activities, policies and standards for physical education programs.

* Not given in 1956-1957.

640. History of Physical and Health Education. Three credit hours. Spring Quarter. Prerequisite, junior standing in the College of Education or the Department of Physical Education and twenty hours in education and allied subjects of which ten must be in education or in physical education. Mr. Daniels.

An historical survey of physical and health education beginning with the physical education of ancient Greece, with special emphasis on recent and contemporary developments in Europe and America.

Not open to students who have credit for Education 642.

641, 644, and 645. See School Health Education following Physical Education.

647. The Teaching of Physical Education (Men and Women). Three credit hours. One Quarter. Section for Men, Winter. Section for Women, Winter. Two lectures and three laboratory periods each week plus field experience. Prerequisite, satisfactory proficiency in Physical Education 411-416 inclusive, or equivalent. Section for Men, Mr. Ashbrook, Mr. Hess; section for Women, Miss Crafts.

The purpose of this course is to develop teaching competencies for prospective teachers of physical education. Students will study, observe, and participate in various phases of the school physical education program including: developing units of instruction, lesson planning, class organization and management, teaching techniques related to motor learning, and methods of evaluating pupil progress.

648. The Teaching of Physical Education (Men and Women). Three credit hours. One Quarter. Section for Men, Spring. Section for Women, Spring. Two lectures and three laboratory periods each week. Prerequisite, satisfactory proficiency in Physical Education 411-416, inclusive, or the equivalent. Section for men, Mr. Hess, Mr. Hixson; section for women, Miss Crafts.

A continuation of Physical Education 647.

649. Camp Administration (Men and Women). Three credit hours. Spring Quarter. Three lecture-laboratory periods each week. Lectures, readings, and field demonstrations. Prerequisite, Physical Education 560 or experience in camp counseling. Mr. Staley.

The organization and direction of camps, particularly summer camps for boys and girls. Special attention is given to the social and educational program for adolescents. Designed for those preparing for administrative positions. Consideration of budgets, equipment, camp sites, program personnel. Practical observations and demonstrations.

651. Minor Problems in Physical Education (Men and Women). One to four credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, permission of the adviser. The Staff.

This course is designed primarily for seniors and graduate students to provide them with an opportunity for the investigation of their professional problems: (a) School Health and Physical Education, (b) Dance.

660. See School Health Education following Physical Education.

682. Organization and Administration of Physical Education (Men and Women). Five credit hours. Winter Quarter. Five lectures each week. Prerequisite, Physical Education 621 or its equivalent. Section for men, Mr. Daniels; section for women, Miss Palmer.

The policies in the organization and administration of the Physical Education program; classification of students, staff, teaching load, time schedule, finances, etc. The administration of the physical education plant; gymnasium, locker rooms, swimming pool, equipment, records. Intramural and interscholastic relationships.

685. Safety, First Aid and Care of Injuries (Men). Four credit hours. Autumn Quarter. Five class hours each week. Prerequisite, ten hours of anatomy and physiology. Mr. Biggs.

A consideration of the methods of prevention and care of injuries occurring in physical education and competitive sports. The course also includes a discussion of the conditioning of

men for athletic contests and of safety provisions important to the conduct of physical education. Successful completion of this course leads to the Red Cross standard or advanced certificate in first aid.

691. Kinesiology (Men and Women). Three credit hours. Section for men, Autumn and Winter Quarters, Mr. Kovacic. Section for women, Winter Quarter, Miss Stein. Four lecture-laboratory periods each week. Prerequisite, acceptable courses in human anatomy.

The science of bodily movement. Basis for: prescription of activities in individual physical education; identification of common athletic injuries; form and style in athletic performance, analysis of coordination in sports, gymnastics, and ordinary activities of daily life.

Open only to majors in physical education.

692. See School Health Education following Physical Education.

693. Advanced Problems in Adapted Physical Education (Men and Women). Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Physical Education 691 and 630 or the equivalent. Section for men, Mr. Daniels; section for women, Miss Gilman.

The organization and methods of physical education for handicapped students and their special problems.

695. Advanced Kinesiology. Three credit hours. Spring Quarter. Three lecture periods each week. Elective. Prerequisite, at least fifteen hours of zoology, anatomy, physiology; Physical Education 630 and 691 and permission of the instructor. Miss Stein.

An advanced course in kinesiology. A consideration of osteology and articulation, muscle structure, laws of mechanics applicable to body movements. An application of principles of physiology of exercise to physical education activities and general body movements. An analysis of movements occurring in occupational, recreational, and corrective physical activities.

For course in Public Recreation: Its Organization and Administration, see the Department of Social Administration, Course 855.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate School.

For description of graduate courses in this department, see the Bulletin of the Graduate School.

SCHOOL HEALTH EDUCATION

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

609. Health Education for Elementary Teachers. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lecture periods each week. Prerequisite, junior standing. Mr. Oberteuffer, Miss Palmer, Miss Allenbaugh.

A consideration of the teacher's responsibility for the health of the school child; discussion of screening, referral, and follow-up techniques; vision and hearing; programs for the exceptional child; and consideration of the teacher's own health.

Not open to students who have credit for Education 664.

610. Health Education for Secondary Teachers. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Required for all students preparing for secondary teaching except those in physical and health education. Miss Palmer, Mr. Cushman, Mr. Bennett, Miss Allenbaugh.

A study of health problems as they relate to the individual secondary school student, factors contributing to healthful living, the organization of a secondary school program, techniques for integration and correlation, resources in the community. Factors influencing the health of the teacher.

Not open for graduate credit.

641. Personal Health Problems (Men and Women). Three credit hours. Autumn Quarter. Three discussion periods each week. Mr. Cushman.

This is an advanced course in personal health problems. It is so conducted that a student does extensive reading in problem areas of his personal interest and works with others toward the solution of certain health problems selected by the group.

644. The Teaching of Health. Four credit hours. Spring Quarter. Three lecture and two laboratory periods each week. Prerequisite, Physical Education 692 or the equivalent. Mr. Oberteuffer, Mr. Cushman, Miss Palmer.

A study of the principles, materials, methods, and resources involved in teaching health to students. A study of the opportunities for integration of health material with other subjects of the organized curriculum. Actual participation in the teaching of health to secondary and elementary school pupils.

645. Organizational Relationships in School Health Education (Men and Women). Three credit hours. Winter Quarter. Prerequisite, Physical Education 692. Mr. Oberteuffer.

This course proposes to continue the orientation of the student in matters of health education, with particular reference to public and organizational relationships. A discussion of the administration of the school health program and the part which the school plays in the total community health program. A discussion of the official and unofficial health organizations. A consideration of school health policies and the principles underlying the school and community health programs.

†660. School Health Education Workshop. Four credit hours for three-week workshop. First term. Methods and material for health teaching, the school health program, school and community organization for health education, and problems of concern, to workshop participants. Full time of students is required, therefore, registrants are not permitted to take other University work concurrently. Open by permission of the instructor to graduate students who are teachers and administrators, school physicians and nurses, and to experienced teachers who in the opinion of the workshop committee have an educational background in the subject matter of the workshop which will be adequate for intensive work in this field.

Graduate students must demonstrate satisfactory ability to deal critically and constructively with a phase of the total problem approved as appropriate for graduate study and must submit individual papers covering in detail their contribution to the total workshop problem. Mrs. Fogle.

692. School Health Services (Men and Women). Three credit hours. One Quarter. Autumn and Winter. Prerequisite, Physical Education 410 or its equivalent and ten hours of biological sciences. Mr. Cushman.

A presentation of the principles underlying the school health service program. A consideration of the problems of the health of the school and the teacher. A study of the teacher's role in medical inspections, physical examinations and control of common school diseases. Observations will be made in schools of physical examinations, systems of record keeping, follow-up services, and classes for the handicapped.

705. Current Progress in Disease Control. Two credit hours. Spring Quarter. Prerequisite, senior or graduate standing in a health science area. One two-hour program per week.

A course designed to familiarize seniors and graduate students with current advances in the field of medicine and related health sciences. Authorities directly associated with research in medicine and health sciences will interpret how current findings in their fields may affect disease prevention and control. Newer knowledge of cancer, dental caries, heart disease, tuberculosis, viral diseases, and special areas as nutrition, endocrinology, and aviation medicine will be discussed.

PUBLIC RECREATION FOR UNDERGRADUATES

A course of study for the preparation of personnel in public recreation has been arranged jointly by the Department of Physical Education and the School of Social Administration. Students interested should consult advisers in the Department of Physical Education or in the School of Social Administration. This course of study leads to the degree of Bachelor of Science in Social Administration.

† Not given during the academic year, 1956-1957.

PHYSICS AND ASTRONOMY

Office, 107 New Physics Building

PROFESSORS H. NIELSEN, COOPER, DAUNT, KORRINGA, LANDE, POOL, SHAFFER, SHAW, AND WILLIAMS, ASSOCIATE PROFESSORS BELL, DICKEY, HESTHAL, KURBATOV, NELSON, C. NIELSEN, OETJEN, PREBUS, AND ZUMSTEIN, ASSISTANT PROFESSORS ERICKSON, HARRIS, HAUSMAN, HEER, AND SESSLER, MR. RILEY

(a) Students desiring a general qualitative survey in physics and astronomy as part of a liberal education may register for General Studies in Physics and Astronomy 431 and 432. No distinction is made between physics and astronomy but rather an attempt is made to unify these fields.

(b) Physics 411, 412, and 413 constitute a quantitative survey of the elementary principles of physics suitable for pre-medical, pre-dental and optometry students as well as those in areas other than engineering.

(c) Physics 431, 432, and 433 constitute an analytical introduction to the principles of physics. A concurrent course in calculus is required. These courses are suitable for students majoring in the physical sciences and engineering.

(d) Astronomy 500 is designed primarily for students who desire to obtain some knowledge of astronomy but have only a brief time to devote to it. Astronomy 401 and 402 constitute an introduction to modern astronomy suitable for students wishing to major in the subject or for those desiring such a course as part of a liberal education.

(e) Physics 420 is a one-Quarter course in meteorology. Physics 643 is a general course suitable for students who have some background in the natural sciences. Physics 644 is designed for students in the agricultural fields but is of more general interest.

GENERAL STUDIES IN PHYSICS AND ASTRONOMY

431. Nature of the Physical World. Five credit hours. One Quarter. Autumn, Winter, and Spring. Four lectures and one demonstration period each week. The McMillin Observatory and its refracting telescope will also be used for observation. Mr. Hesthal.

This course ignores distinctions between modern physics and astronomy and discusses phenomena that are commonly encountered or likely to be encountered by the average individual. It selects its subject matter from both sciences in such a way as to give an elementary but comprehensive picture of the physical universe. Phenomena including the latest developments in science are discussed in a descriptive, explanatory manner and no previous scientific or mathematical training is assumed.

432. Nature of the Physical World. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures and one demonstration period each week. The McMillan Observatory and its refracting telescope will also be used for observation. Mr. Hesthal.

A continuation of General Studies in Physics and Astronomy 431. It is not necessary that General Studies in Physics and Astronomy 431 precede this course.

PHYSICS

411. General Physics: Mechanics, Wave Motion, and Sound. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures and recitations and one two-hour laboratory period each week. Prerequisite, two entrance units in mathematics. Mr. Cooper and staff.

412. General Physics: Heat, Light Spectroscopy. Five credit hours. Winter Quarter. Four lectures and recitations and one two-hour laboratory period each week. Prerequisite, Physics 411. Mr. Cooper and staff.

413. General Physics: Magnetism, Electricity, and Electronics. Five credit hours. One Quarter. Autumn and Spring. Four lectures and recitations and one two-hour laboratory period each week. Prerequisite, Physics 411. Mr. Cooper and staff.

420. Descriptive Meteorology. Five credit hours. Autumn Quarter. Four recitations and one two-hour laboratory period each week. No prerequisite. Mr. J. Shaw.

An introductory course in meteorology for increasing the understanding of local weather phenomena and describing commonly observed weather changes. The laboratory period includes instrumental observations, the use of meteorological data and study of weather maps.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Unless otherwise indicated, the prerequisites for "600" and "700" courses are one year of calculus and one year of college physics.

Courses in the "700" group are not open to third year undergraduates except with permission of the instructor.

601. Intermediate Physical Mechanics. Three credit hours. One Quarter. Autumn and Winter. Mr. Shaffer.

A fundamental intermediate course serving as preparation for other physics courses. Selected topics from classical mechanics are used to introduce students to a few fundamental analytical methods used in advanced physics courses. Required of all undergraduate physics majors.

Not open for graduate credit to students majoring in Physics.

603. Intermediate Heat. Three credit hours. Spring Quarter. Mr. Erickson.

Introduction to the theory of heat with applications.

Not open for graduate credit to students majoring in Physics.

605. Geometrical Optics. Three credit hours. One Quarter. Autumn and Winter. Three recitations and demonstration lectures each week. Mr. Oetjen.

Advanced theory of geometrical optics including thick lenses, types of mirrors, combinations of lenses and mirrors, apertures, and aberrations in optical systems.

606. Introductory Physical Optics. Three credit hours. One Quarter. Winter and Spring. Mr. Oetjen.

Introduction to diffraction; interference and polarization phenomena. Application of these phenomena in the design and performance of optical instruments.

Not open for graduate credit to students majoring in Physics.

610. Electron Physics. Three credit hours. Winter Quarter. Prerequisite, Physics 601 or equivalent. Mr. Bell.

Free electron gas theory of metals including thermionic emission, photoelectric emission, contact potentials, electro-thermal and magneto-electric effects. Discharge of electricity in gases.

612. Periodic and Transient Electric Currents. Three credit hours. Spring Quarter. Prerequisite, Physics 601 or equivalent. Mr. Dickey.

An introductory course on the response of circuits with constant parameters to both constant and variable voltages; electronic circuits and instruments used in physical research.

614. Introduction to Modern Physics. Three credit hours. One Quarter. Autumn and Winter. Mr. H. Nielsen.

An intermediate discussion of some fundamental ideas of modern physics to prepare students for the specialized courses in that field. Topics include fundamental particles of matter; qualitative concepts of quantum theory and their historical development; emission and absorption processes; introductory ideas of atomic and molecular structure. Required of all undergraduate Physics majors.

Not available for graduate credit for students majoring in Physics.

615. Introduction to Nuclear Physics. Three credit hours. One Quarter. Winter and Spring. Prerequisite, Physics 601 and 614 or equivalent. Mr. Heer.

Properties of the atomic nucleus. Disintegration processes; particle and photon emission; fission; fusion. Detection techniques for nuclear radiations. Energy levels and selection rules.

Not open for graduate credit to students majoring in Physics.

616. Advanced Physical Laboratory. Three credit hours. Any Quarter. Two three-hour laboratory periods each week. Prerequisite, one year of college physics. Mr. Shaw, Mr. Zumstein.

This course is intended to give the advanced student in science practice in precise physical measurements, involving the use of high grade mechanical, optical, electrical and thermal instruments.

The work undertaken will be elected from the following topics:

- (a) Mechanics.
- (b) Optical Measurements.
- (c) Electrical Measurements.
- (d) Ionization and Radioactivity.
- (e) Heat.
- (f) Acoustics.
- (g) Spectroscopy.
- (h) X-rays (Winter only).

A student may repeat this course until he has obtained a maximum of twenty-four credit hours. Only three credit hours may be taken during any one Quarter. A student may accumulate not more than six credit hours in any one of the above topics.

628. Electronic Techniques in Physical Measurements. Three credit hours. Spring Quarter. Two three-hour laboratory periods each week. Mr. Bell, Mr. Dickey.

A laboratory study of fundamental electronic instruments and circuits used in physical research.

633. Nucleonic Measurements and Instrumentation. Three credit hours. One Quarter. Winter and Spring. One lecture and four hours of laboratory each week. Prerequisite, Physics 615 and permission of the instructor. Mr. Pool.

Emphasis will be put on the proper operation and construction of instruments used in nuclear determinations. Typical experiments will be performed with a cloud chamber, geiger counter, ionization chamber, beta-ray spectrophotograph and the cyclotron.

635. Geometrical Optics Laboratory. Two credit hours. Winter Quarter. One four-hour laboratory period each week. Concurrent or prerequisite, Physics 605. Mr. Oetjen.

Selected intermediate experiments in geometrical optics.

636. Physical Optics Laboratory. Two credit hours. Spring Quarter. One four-hour laboratory period each week. Concurrent or prerequisite, Physics 606. Mr. Oetjen.

Selected intermediate experiments in physical optics.

***643. General Meteorology.** Three credit hours. Autumn Quarter; Summer Quarter of even-numbered years. Prerequisite, fifteen hours of natural science, including one of the following courses: Agronomy 501; Botany 402; Geography 403; Geology 402; Physics 412 or 432; or Zoology 402.

The study of the atmosphere and its phenomena. Personal observation and prediction of weather events.

Not open to students who have credit for Physics 510.

645. Descriptive Acoustics. Three credit hours. Autumn Quarter. This course cannot be counted toward a major in physics. Prerequisite, junior standing in music, speech, or science education. Mr. Shaw, Mr. Shaffer.

A descriptive non-mathematical treatment of acoustics with applications to music and speech, including such topics as the following: production, propagation and reception of sound; characteristics of sounds; room acoustics; acoustical apparatus; hearing; etc.

647. Physics of the Lower Atmosphere. Three credit hours. Winter Quarter. Prerequisite, Physics 601 or equivalent. Mr. J. Shaw.

Atmospheric processes including cloud physics, natural and artificial precipitation, atmospheric electricity, circulation, transmission of radiation.

648. Physics of the Upper Atmosphere. Three credit hours. Spring Quarter. Prerequisite, Physics 601 or equivalent. Mr. J. Shaw.

The structure of the upper atmosphere as obtained from studies of the ionosphere, ozonosphere, aurorae, meteors, and use of rockets.

701. Minor Problems in Physics. One to fifteen credit hours. All Quarters. Conference, library and laboratory work. Prerequisite, satisfactory ad-

* Not given in 1956-1957.

vanced courses in experimental and theoretical physics. A student may repeat this course and may spend all or any part of his time on it during a Quarter. All instructors.

This course is designed to permit any properly qualified student to avail himself of the library and laboratory facilities of the department for carrying out a minor investigation or for adding to his knowledge and techniques in some branch of physics. A student may elect to work in experimental or theoretical physics or physical meteorology.

Students who have specialized interest in some field of physics may elect this course to secure an opportunity for *independent reading and study* under the supervision of an instructor. The student will be permitted to choose the instructor and, subject to his approval, the field in which this reading is to be done.

702. Kinetic Theory of Gases. Three credit hours. Autumn Quarter. Prerequisite, Physics 603 or equivalent, and Mathematics 601 and 611 or 603 and 609. Mr. Daunt.

Introduction to kinetic theory of gases with applications to physical systems.

Not open to students who have credit for Physics 604.

***709. Wave Motion and Sound.** Three credit hours. Autumn Quarter. Prerequisite, Physics 601 and Mathematics 611 or equivalent. Given in alternate years. Mr. Shaw.

Theory of wave motion; production, propagation and detection of sound waves; measurements and applications.

Not open to students who have credit for Physics 621.

712. Fundamentals of Electricity and Magnetism. Three credit hours. Autumn Quarter. Prerequisite, Physics 601 or equivalent and Mathematics 661. Mr. Heer.

Mathematical theory of classical electricity and magnetism.

Not open to students who have credit for Physics 608.

713. Electromagnetic Field Phenomena. Three credit hours. Winter Quarter. Prerequisite, Physics 601, 712, or equivalent, and Mathematics 611 or equivalent. Mr. Dickey.

An introductory course in Maxwell's theory of the electromagnetic field.

Not open to students who have credit for Physics 613.

718. Modern Atomic Spectroscopy. Three credit hours. Autumn Quarter. Prerequisite, Physics 601 and 614 or equivalent. Mr. Cooper, Mr. Williams.

Structure of the atom; the vector model; coupling of angular momenta. Classification of line spectra, including such topics as quantum numbers, selection rules, line strengths, Zeeman and Stark effects and forbidden transitions.

Not open to students who have credit for Physics 618.

719. Spectra and Structure of Molecules. Three credit hours. Spring Quarter. Prerequisite, Physics 601 and 614 or equivalent. Mr. Bell, Mr. Shaffer.

Review of experimental methods and data on band spectra of molecules; empirical classification of spectra and correlation with molecular energy states; relation of energy expressions to molecular structure; selection rules and intensities of transitions; macroscopic properties of molecules obtained from band spectra; applications to chemical problems.

Not open to students who have credit for Physics 619.

720. X-rays and Atomic Structure. Three credit hours. Winter Quarter. Prerequisite, Physics 601 and 614 or equivalent. Mr. Cooper.

Production, measurement and effects of X-rays, including gamma rays; classical electron theory of the reflection, refraction, absorption, and scattering of X-rays; quantum theory of the origin of X-ray spectra and structure of heavy atoms.

Not open to students who have credit for Physics 620.

721. Fundamentals of Nuclear Physics. Four credit hours. Winter Quarter. Prerequisite, Physics 718 or equivalent. Mr. Jastram.

Detailed consideration of topics involved in experimental nuclear research; beta decay, shell

* Not given in 1956-1957.

structure, internal conversion, resonance, scattering, elementary particles, angular correlation, collision dynamics. Recommended preparation for this course includes Physics 718 and a concurrent or previous course in quantum mechanics.

727. Methods of Quantum Mechanics I. Three credit hours. Winter Quarter. Prerequisite, Physics 601 and 614 or equivalent. Mr. Nielson, Mr. Bell.

Introduction to Schrodinger and matrix techniques of quantum mechanics; applications to simple problems, particularly those of chemical interest; perturbations, quantum mechanical resonance, etc.

Not open to students who have credit for Physics 627.

728. Methods of Quantum Mechanics II. Three credit hours. Spring Quarter. Prerequisite, Physics 727. Mr. Nielson, Mr. Bell.

A continuation of Physics 727 with applications to more complicated problems; mechanics of atoms and molecules; approximate methods of solution.

730. Analysis of Physical Measurements. Three credit hours. Autumn Quarter. Prerequisite, Physics 601, 614 and six hours of advanced laboratory or equivalent. Mr. C. Nielsen.

This course deals with the nature of physical measurements; types of data and their analytical treatment; relations between physical situations and mathematical distributions; curve fitting, errors; application of analytical methods to typical physical problems.

740-741-742. Introduction to Theoretical Physics. Three credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, Mathematics 601 and Physics 601 or equivalent. Mr. Shaffer.

A fundamental course in classical mechanics including reference frames and their transformations; dynamics of particles and systems of particles; dynamics of rigid rotators; Hamilton's principle; Lagrange's equations; special relativity; introductory elasticity and fluid dynamics.

Not open to students who have credit for Physics 623-624-625.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 684.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ASTRONOMY

Offices: Emerson McMillin Observatory
and 107 New Physics Building

PROFESSORS BOBROVNIKOFF AND HYNEK

Office, Perkins Observatory, Delaware, Ohio

PROFESSORS BOBROVNIKOFF, HYNEK, AND MERRILL, ASSOCIATE PROFESSORS
KEENAN AND KELLER (DIRECTOR), ASSISTANT PROFESSOR SLETTEBAK

Attention is called to the facilities available for instruction and research in astronomy. These include the McMillin Observatory with a 12.5 inch refracting telescope on the campus and the Perkins Observatory with a 60 inch reflecting telescope which is the fourth largest in the United States.

401. General Astronomy I. Five credit hours. Autumn Quarter. Four class hours and one two-hour laboratory period each week. Prerequisite, two entrance units in mathematics. Mr. Bobrovnikoff, Mr. Hynek, Mr. Slettebak.

Astronomy 401 and 402 form a comprehensive introduction to the methods, instruments and factual content of modern astronomy. Astronomy 401 deals primarily with the solar system and the earth as an astronomical body.

Not open to students who have credit for Astronomy 500 or 501.

402. General Astronomy II. Five credit hours. Winter Quarter. Four class hours and one two-hour laboratory period each week. Prerequisite, Astronomy 401. Mr. Bobrovnikoff, Mr. Hynek, Mr. Sletteback.

A continuation of Astronomy 401 with emphasis on the stellar universe and elements of physical astronomy.

Not open to students who have credit for Astronomy 500 or 502.

500. Descriptive Astronomy. Five credit hours. Spring Quarter. No prerequisite. Mr. Hynek.

This is an introductory course designed to give an appreciation of the place of astronomy in man's cultural and scientific development. Chief emphasis is on the descriptive and historical aspects of the subject. This course is suitable for students who have time for only one Quarter's work in astronomy.

Not open to students who have credit for Astronomy 401 or 402.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For "600" courses in Astronomy to be used as electives, see Bulletin of the College of Arts and Sciences.

651. Introduction to Astrophysics. Three credit hours. Spring Quarter. Prerequisite, Physics 718 or its equivalent and Mathematics 538 or 543. Mr. Slettebak, Mr. Keenan.

Study of the light and microwave radiation from stars and nebulae to find the composition, density and temperature of matter in and between the stars. Nuclear sources of stellar energy.

Not open to students who have credit for Astronomy 701.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council

For description of graduate courses in this department see the bulletin of the Graduate School.

PHYSIOLOGY

Office, 312 Hamilton Hall

PROFESSORS OGDEN, ANGERER, BOZLER, BRECHER (RESEARCH), HITCHCOCK, SAPIRSTEIN, AND MYERS (RESEARCH), ASSOCIATE PROFESSORS BEMAN, GRUBBS, KING, AND STACY, ASSISTANT PROFESSORS ALLISON, BROWNELL, COULTER, HULL, LESSLER, NISHIKAWARA, TOMASHEFSKI, AND ZATZMAN

421. Introduction to Physiology. Five credit hours. One Quarter. Autumn and Spring. Four lectures or recitations and three laboratory hours each week. No prerequisite. This course meets the needs of students in nursing, majors in physical education, and home economics. Staff.

A brief survey of the structural organization of the body from the cell to organism and of the properties of living matter is followed by a description of the structure and a study of the function of the muscular, nervous (including sense organs) and digestive systems (including energy and food metabolism).

Students having earned credit in Physiology 506 and 507 may not enroll for credit thereafter in Physiology 421 or 422.

422. Introduction to Physiology. Five credit hours. One Quarter. Winter and Summer. Four lectures or recitations and three laboratory hours each week. Prerequisite, Physiology 421. This course meets the needs of students in nursing, majors in physical education, and home economics. Staff.

A continuation of Physiology 421. The structures and functions involved in a study of blood and other body fluids, renal system, respiration, control of body temperature, and the integrative action of the endocrine organs.

Students having earned credit in Physiology 506 and 507 may not enroll for credit thereafter in Physiology 421 or 422.

506. Intermediate Physiology. Five credit hours. Winter Quarter. Four lectures or recitations and three laboratory hours each week. Prerequisite, two Quarters in chemistry and one Quarter in anatomy. Mr. Angerer and staff.

The concepts and principles involved in the activities of muscles and nerves; central and peripheral nervous systems, including sense organ; secretion, digestion and motility of digestive tract; and energy and food metabolism.

Students having earned credit in Physiology 421 and 422 may not enroll for credit thereafter in Physiology 506 or 507.

507. Intermediate Physiology. Five credit hours. Spring Quarter. Four lectures or recitations and three laboratory hours each week. Prerequisite, Physiology 506 or equivalent. Mr. Angerer and staff.

A continuation of Physiology 506. The concepts and principles involved in the functions of body fluids (blood, interstitial, cerebrospinal), heart and blood vessels, respiration, acid-base mechanisms, kidney and sweat glands, control of body temperature and integrative action of the endocrine organs.

Students having earned credit in Physiology 421 and 422 may not enroll for credit thereafter in Physiology 506 or 507.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Advanced Mammalian Physiology. Five credit hours. Winter Quarter. Four lectures and one three-hour laboratory period each week. Prerequisite, inorganic and organic chemistry, one year college physics, and one year biological science or permission of department chairman. Winter Quarter. Staff.

Advanced physiology of nerve-muscle, central nervous system, special senses, and digestion and metabolism.

602. Advanced Mammalian Physiology. Five credit hours. Spring Quarter. Four lectures and one three-hour laboratory period each week. Prerequisite, inorganic and organic chemistry, one year college physics, and one year biological science or permission of department chairman. Spring Quarter. Staff.

Advanced physiology of body fluids and excretion, circulation respiration, body temperature regulation, and endocrines.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department, see the Bulletin of the Graduate School.

POLITICAL ECONOMY

(See Economics and Sociology)

POLITICAL SCIENCE

Office, 106 University Hall

PROFESSORS MANSFIELD, WALKER, HELMS, AUMANN, ZINK, AND HEIMBERGER, ASSOCIATE PROFESSORS NEMZER, KAWAI, AND SPITZ, ASSISTANT PROFESSORS JAFFA, COOK, AND HERSON, MR. MILLER, MR. LOTT, MR. CHRISTOPH, MR. KETTLER, AND ASSISTANTS

ELEMENTARY COURSE OFFERINGS

Principal Audience	Commerce and Education	Arts (B.A.)	Engineering and Agriculture
Prerequisite	None	History 421-422-423	None
First Course	Political Science 401 (5 hours) American National Government	Political Science 507 (5 hours) Fundamentals of Government	Political Science 599 (8 hours) Introduction to Political Science
Normal Sequence	Political Science 510 (5 hours) American State and Local Government or Political Science 509 (5 hours) Foreign Governments	Political Science 508 (5 hours) Government of the United States or Political Science 509 (5 hours) Foreign Governments	Political Science 595 (8 hours) Local Government in the United States

Upper-class Course Prerequisites

Unless otherwise specified in course descriptions below, two courses in political science, or a declared major in a social science, or the consent of the course instructor. In the case of Arts College juniors and seniors, the history and social science requirements of the B.A. curriculum take the place of these prerequisites.

The elementary courses in the department provide sequences of 6, 10 or 15 hours, appropriate to differing interests and curriculum and schedule requirements. One 10-hour sequence (401 and 510) takes American government as its focus; another (401 and 509) keeps to the national government level, here and abroad. A 6-hour sequence (599 and 595) moves from basic principles to manifestations of government close to home. A 10 or 15-hour sequence (507 and 508 or 509, or both) begins with institutions and ideas, and covers systematically the major national governments of the world. Inter-college and off-campus transfer students may enter the second course in any of these sequences from the first course in either of the others.

401. American National Government. Five credit hours. One Quarter. Autumn, Winter, Spring. Department staff.

Organization and functions of the national government. The Constitution; nature of the federal system; citizenship and popular participation in governing; extent and character of national powers; changing relations of the national government to the states and to the individual.

Not open to students who have credit for Political Science 507.

509. Foreign Governments and Politics. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, one course in Political Science or History 423 or History 401-402 in sequence. Mr. Zink and staff.

A comparative study of the governmental systems of foreign states with emphasis upon Great Britain, Russia, France, Germany, Italy, China, and Japan. Emphasis on the enduring heritage of political institutions as well as on postwar problems, theories, and practices.

Not open to students who have credit for Political Science 402.

510. American State and Local Government. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, one course in Political Science. Mr. Herson and staff.

A general study of the organization and functions of the states and their municipal subdivision in the United States. The constitutional bases of state government; political parties and popular control; the suffrage; the state legislature and its work; the office of governor; judicial and legal problems.

Not open to students who have credit for Political Science 410.

595. Local Government in the United States. Three credit hours. One Quarter. Winter and Spring. Mr. Walker, Mr. Herson.

County, municipal and special governmental districts, comparatively treated; their legal status, political significance, governmental structure and functions; their relations with state and national governments.

599. Introduction to Political Science. Three credit hours. One Quarter. Autumn, Winter, Spring. Not open to students with previous credit in political science. Mr. Lott and staff.

An acquaintance with the most significant political institutions, processes and problems, including: political parties, elections, legislation, civil service, and courts; the parliamentary and authoritarian governments of Europe; international government. Lectures, readings, and discussion.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Unless otherwise specified in the course descriptions below, and except for Arts College students with Junior standing, prerequisites for "600" level courses are two courses in political science, or a declared major in another social science, or the consent of the instructor. In the case of Arts College juniors and seniors, the history and social science requirements of the B.A. curriculum take the place of these prerequisites.

601. Introduction to Political Theory. Five credit hours. Autumn Quarter. Mr. Spitz.

An introduction to the major problems of political philosophy; power and justice, law and morality, freedom and authority.

605. Principles of Public Administration I. Five credit hours. Autumn Quarter. Mr. Mansfield, Mr. Walker.

Basic problems of public administration; ends and means; the formulation of policy; organization and management; working methods of control; coordination and responsibility.

606. Principles of Public Administration II. Five credit hours. Winter Quarter. Four lecture and discussion sessions and one field interview each week. Prerequisite, three courses in political science. Mr. Mansfield, Mr. Walker.

An examination of the principles of public administration as applied to the rendering of services to the public by national, state and local governments: the protection of life and property, the promotion of trade and commerce, the regulation and operation of public utilities, city and metropolitan planning, and the furtherance of public welfare, noting in each case the part which is played by each of the levels of government. The field work in this course will require personal interviews with public officers and weekly papers based upon them.

607. American Municipal Government. Five credit hours. Autumn Quarter. Mr. Walker, Mr. Herson.

A comparative study of modern municipalities in the United States; their social significance; their governmental structure; their relation to the state; the experience with government by council, mayor, commission, and manager; methods of popular participation.

Not open to students who have credit for Political Science 500 or 595.

609. Government of Ohio. Three credit hours. Winter Quarter. Mr. Walker, Mr. Aumann.

Constitution, structure and functions; the electoral system; finance and personnel; judiciary and law enforcement; organization and conduct of administrative programs; state relations with local governments.

611. Introduction to Jurisprudence. Five credit hours. Autumn Quarter. Mr. Aumann.

An introductory study of legal concepts. An attempt is made both to give the prospective law student an analytical and historical guide into his subject, and to give those who do not intend to pursue the study of law an idea of its significance in social organization, and its relation to political and economic science.

†612. International Law. Five credit hours. Autumn Quarter.

A study of the principles of international law, including analysis of theories concerning its nature and fundamental conceptions, from the Seventeenth Century to the present; its relation to national law; problems of international legislation and codification. Materials include court decisions, treaties and conventions, and analogous materials.

613. Contemporary International Politics. Five credit hours. One Quarter. Autumn and Spring. Mr. Helms, Mr. Nemzer.

A study of the political relations among sovereign states; methods and goals of diplomacy; current problems in major areas of tension; tendencies toward administrative, judicial and legislative world-organization.

615. Administration of Justice. Five credit hours. Winter Quarter. Mr. Aumann.

A study of the nature, purpose and limitations of law as administered through courts. The development, organization, and procedure of our judicial system. Recent trends in legal thinking.

616. American Constitutional Law. Five credit hours. One Quarter. Autumn and Spring. Mr. Aumann.

A study of leading constitutional principles in the United States as interpreted by the courts. Special studies will be made of such topics as the following: the adoption and amendment of constitutions; the judicial power; citizenship; private rights; powers of Congress; war powers; police powers of the states; political privileges. Designed for students who desire a non-technical knowledge of the more important federal and state constitutional principles in the United States.

Not open to students who have credit for more than one of the following: Political Science 641, 642, 643.

621. The Socratic Method in Political Theory. Three credit hours. Autumn Quarter. Mr. Jaffa.

The Socratic revolution in western political philosophy. Its consequences for human thought about man, the state, law, justice, property, power, happiness.

† Not given during the academic year, 1956-1957.

622. The Scientific Method in Political Theory. Three credit hours. Winter Quarter. Mr. Jaffa.

Examination and evaluation of some of the more significant attempts to construct political science upon the model of the natural sciences.

624. American Political Ideas. Three credit hours. Winter Quarter. Three lecture and discussion periods each week. Mr. Spitz.

An analysis of American ideas on law and government, authority and liberty, oligarchy and democracy, from the Puritans to the present day.

625. Great Britain and the British Commonwealth. Five credit hours. Spring Quarter. Mr. Zink.

A general study of the government of Great Britain and of the Commonwealth of Nations as an association of self-governing states.

628. Governments of Western Europe. Five credit hours. Winter Quarter. Mr. Zink.

A study of political institutions in West Germany, France, and one or more of the small states of Western Europe. Emphasis on the constitutional basis, governmental structure, political parties, and problems of postwar reconstruction.

633. Legislation. Three credit hours. Spring Quarter. Mr. Walker.

The processes of law making in the United States, the constituent process, statute law making, legislative drafting, legislative procedure, judicial review, the common law, executive ordinance, popular law making.

634. Public Opinion and Political Processes. Five credit hours. Winter Quarter.

Nature and measurement of public opinion and its effect on political processes; genesis of political attitudes; propaganda of pressure groups; government propaganda in peace and war; political influence of social institutions, including press, radio, and movies. Lectures, discussions, and reports.

635. American Political Parties and Pressure Groups. Five credit hours. One Quarter. Autumn and Winter. Mr. Helms.

An analysis of the organization, programs and campaign methods of political parties and of such pressure groups as labor, business, agriculture, etc. Methods of nomination, suffrage qualifications, campaign finance, government regulation of parties and pressure groups and the conduct of elections.

636. The Soviet Union and Its Satellites. Five credit hours. Autumn Quarter. Mr. Nemzer.

A general study of the Soviet Union and its neighboring dependent states; governmental and party institutions; ideology and methods; problems of Communist dictatorship.

637. Soviet Foreign Policy. Five credit hours. Winter Quarter. Mr. Nemzer.

The Soviet outlook abroad; basic factors and choices in Soviet foreign policy; Soviet diplomacy and the Cominform; the Soviet sphere of influence; the technique of infiltration; the USSR and the UN; the USSR and the U. S.

Not open to students who have credit for Political Science 629.

640. The United States in World Affairs. Five credit hours. Spring Quarter. Mr. Nemzer.

An examination of agencies and procedures in the formulation and execution of contemporary American foreign policy, followed by an intensive study of American policy in the United Nations, and concerning the USSR and Western Europe.

649. International Relations of the Far East. Five credit hours. Spring Quarter. Mr. Kawai.

The Far East in contemporary world politics; underlying the foreign policies of the nations concerned with this region.

650. The Governments and Politics of the Far East. Five credit hours. Winter Quarter. Mr. Kawai.

Governmental institutions of China, imperial, republican, and Communist. Constitutionalism vs. militarism, occupation reforms, and contemporary politics in Japan. The governments of nearby east Asian countries.

651. Southeast Asia. Three credit hours. Autumn Quarter. Mr. Kawai.

The governments and politics of the Philippines, Indonesia, Indo-China, Malaya, Thailand and Burma; and the basic factors underlying the contemporary problems of the Southeast Asiatic region in relation to world politics.

†652. Regional Patterns in International Politics. Three credit hours. Senior staff.

A study of basic power concepts and political institutions and the international relations of a designated region. Under this number, major power complexes in the world will be treated in turn:

- (a) The Far East
- (b) The Middle East
- (c) Central Europe
- (d) Latin America

May be repeated up to a total of 15 hours credit.

701. Minor Problems. One to five credit hours. Autumn, Winter, and Spring Quarters. Informal conference, the intent being to allow full scope to the initiative of the student. Prerequisite, senior standing and forty hours of credit in the social sciences, including fifteen hours in political science. Department staff.

A special topic is assigned to each student and results are tested by papers and special examinations.

705-706-707. Honors Courses. Three to five credit hours. Autumn, Winter, and Spring Quarters. Informal conferences, the intent being to allow full scope to the initiative of the student. Prerequisite, senior standing and forty hours of credit in the social sciences, including fifteen hours in political science, with a record of "A" in at least half of the Political Science courses and an average of "B" in the remainder. At least two Quarters are required of candidates for the degree of Bachelor of Arts with Distinction in Political Science. Department staff.

A special topic is assigned to each student each Quarter, and results are tested by the requirement of papers and special examinations. Failure to receive a grade of "B" in this course is a disqualification for special honors.

Not open for graduate credit.

731. Methods of Governmental Research. Three credit hours. Autumn Quarter. Prerequisite, fifteen hours in political science and senior standing. Mr. Mansfield.

The materials of political science; history of procedure in political science research; research techniques; presentation of results of research.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council

For description of graduate courses in this department see the Bulletin of the Graduate School.

PORTUGUESE

(See Romance Languages and Literature)

† Not given during the academic year, 1956-1957.

PRACTICAL ARTS AND VOCATIONAL EDUCATION

(See Education)

PRINCIPLES AND PRACTICE OF EDUCATION

(See Education)

PSYCHOLOGY

Office, 325 Arps Hall

PROFESSORS BURTT, GODDARD (EMERITUS), WILLIAMS, (EMERITUS), PRESSEY, TOOPS, RENSHAW, ENGLISH, SHARTLE, ROBINSON, WICKENS, KELLY, WHERRY, FITTS, ROTTER, KINZER, HORROCKS, FLETCHER, AND BURNETT, ASSOCIATE PROFESSORS STOGDILL, MEYER, PEPINSKY, MUSSEN, AND RATOOSH, ASSISTANT PROFESSORS WISPE AND SCODEL, MR. KAGON, INSTRUCTORS AND ASSISTANTS

The department offers instructional and training facilities in practically all divisions of Psychology. For administrative purposes and for the general guidance of the student these have been grouped into a number of areas but there is great flexibility in the working out of a unified program of study. The following areas and approximate sequences of courses are suggested for preliminary guidance but students contemplating a program emphasizing psychology are urged to consult with the department as early as possible. This is particularly the case with graduate students. Thus in planning for a Doctor's degree a reading knowledge of French and German should be acquired during the undergraduate period.

I. General, Experimental, and Comparative Psychology: 401-402, 504, 505, 506, 507, 508, 521, 541, 601-602-603, 605, 606, 608, 626, 629, 645, 646, 647, 650, 655, 656, 825, 811.

II. Educational Psychology—preparation for psychological service to the schools: 401 and 407 (both required in the College of Education), 402, 610, 608, 613, 615, 611, 628, 631, 640, 663, 676, 650, 695, 713, 803, 861.

III. Abnormal and Clinical Psychology: 401, 408, 504, 505, 506, 507, 508, 521, 541, 609, 611, 612, 622, 631, 671, 684, 690, 695, 713.

IV. Industrial Psychology: 401-402, 635, 608, 628, 639, 637, 601, 613, 644, 640, 626, 651, 684, 689, 705, 706, 713, 785, 788, 814, 807.

V. Personnel and Counseling: 401, 402, 608, 637, 639, 640, 659, 781, 684, 689, 785, 814.

PSYCHO-EDUCATIONAL SERVICE. The Department offers a consultation service to University students. Direct contact may be made with the following members of the staff: Academic orientation, study problems, reading difficulties—Mr. Kinzer, 301 Arps Hall; Vocational orientation or choice—Mr. Fletcher, Armory; Social and personal orientation—Mrs. Stogdill, 300 Arps Hall, Mr. Kelly, Mr. Rotter, 304 Arps Hall, Mr. Mussen, 317 Arps Hall, Mr. Scodel, 412 Arps Hall.

401. General Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five meetings each week. Lectures, discussions, laboratory exercises, and reports. All instructors.

An introductory course and fundamental to all subsequent courses in the department. This course, together with Psychology 402, undertakes to present a survey of the whole field of human psychology. This includes a study of the experimental findings in infant behavior and the subsequent development of adult modes of response, such as emotion, attention, habit, thinking, and the nature and development of personality.

The facts and principles of human behavior pertinent to everyday life are stressed. The student is required to develop skill in the practical applications of experimental findings in the fields of infant behavior, motivation, and emotion.

402. General Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five meetings each week. Lectures, discussions, laboratory exercises, and reports. All instructors.

A continuation of Psychology 401. Further emphasis on the development of a scientific attitude toward personal psychological problems in the fields of learning, thinking, intelligence, and personality.

403. Introductory Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Zoology 401-402 or Botany 401-402, or twenty hours of natural science. All instructors.

An introduction to psychology for students with science background; designed to round out the natural science sequence in the College of Engineering and in B.Sc. curricula of the College of Arts and Sciences.

Not open to students who have credit for Psychology 401 or 402.

404. Educational Psychology for Medical Personnel. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lectures each week. Lectures, discussions, laboratory exercises and reports. Prerequisite, Psychology 401 and Zoology 401. All instructors.

This course is designed to present the major facts of human development from birth through maturity as they have application to the work of nurses, occupational therapists, dental hygienists, and other medical personnel. The course begins with a brief survey of human capacities, abilities, interests, individual differences and total development throughout the life span. It then proceeds to a study of learning and personality and considers investigations in the fields of learning and personality which are of professional interest to medical personnel. Throughout the course experimental data are stressed and practical problems emphasized, with frequent laboratory exercises.

Not open to students who have credit for Psychology 407.

407. Educational Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lecture hours each week. Lectures, discussions, laboratory exercises, and reports. Prerequisite, Psychology 401. All instructors.

The course begins with a brief study of the capacities, abilities, and interests of children, individual differences, and total development through the school years. It then proceeds to a study of learning and the results of investigations regarding the progress of learning in school. Throughout the course experimental data are stressed and practical problems emphasized, with frequent laboratory exercises.

Required in the College of Education.

408. Mental Hygiene. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Not open to Seniors. Prerequisite, Psychology 401. Mrs. Stogdill.

A general survey of the principles of mental hygiene. A study of social and emotional adjustment, and personality in light of the principles of mental hygiene. Adjustment problems of the college student.

409. Introduction to Applied Psychology. Three credit hours. Spring Quarter. Three lecture hours each week. Prerequisite, Psychology 401. Mr. Burt.

A systematic discussion of problems, methods, and typical results of psychology in the practical fields of medicine, law, education and business.

411. Psychology of Effective Student Adjustment. Three credit hours. One Quarter. Autumn, Winter, Spring. Lectures, reading, reports, individual conferences. Mr. Kinzer, Mr. Robinson.

The psychological principles of effective learning will be not only taught but demonstrated and applied under the supervision of the instructor. Students who feel themselves handicapped by ineffective habits of study or poor adjustment to college are urged to enroll in this course.

The psychological problems involved in the transition from control by adults to self-management will be considered. The resources of clinical psychology will be made available for the solution of difficulties of individual adjustment.

For further details see the Junior Dean or the Secretary of the College.

501. Psychological Problems in Engineering. Three credit hours. Spring Quarter. Three lecture hours each week. Open only to juniors and seniors in the College of Engineering. Mr. Burt.

Selection and motivation of employees; psychology in industrial efficiency and in selling; handling men; the human factor in engineering.

504. General Psychology: Sensation and Perception. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, junior standing and Psychology 401 or 403. Required for three credit hours of psychology majors in the College of Arts. Mr. Ratoosh.

This course deals with the subject matter and methods of psychology as a life science, with special reference to problems of sensory intensity, the sensory discrimination functions, and perceptual functions.

‡ Credit shall not count toward graduation.

505. General Psychology: Motivation and Action. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, junior standing and Psychology 401 or 403. Required for three credit hours of psychology majors in the College of Arts. Mr. Meyer.

This course deals with the subject matter and methods of psychology as a life science, with special reference to problems of motivation, reflex and voluntary action, emotion and affection.

506. General Psychology: Learning and Thinking. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, junior standing and Psychology 401 or 403. Required for three credit hours of psychology majors in the College of Arts.

This course deals with the subject matter of psychology as a life science, with special reference to the problems of the learning process, the acquisition of skill, retention and forgetting, and reasoning, abstraction, and generalization.

507. Genetic Psychology. Five credit hours. Winter Quarter. Five lecture hours each week. Lectures, recitations, and reports. Required of undergraduate majors in Psychology for the College of Arts. Prerequisite, Psychology 401 or 403. Mr. Horrocks, Mr. Pressey.

This course is designed to present the facts of human development with some phylogenetic perspective. Topics considered are: physical development, particularly with reference to the development of the nervous system; inheritance of mental traits; innate tendencies, their characteristics, description, and modification; play; mental states, their physiological basis and development with growth and training; moral and religious development; development of personality; changes with age through the adult and older years.

508. Quantitative Methods in Psychology. Five credit hours. Autumn Quarter. Prerequisite, Psychology 401 or 403. Required of Psychology majors in the College of Arts. Mr. Wherry.

Methods of measurement in psychology, procedures used in expressing behavior in terms of quantity, the significance of quantity in the study of human traits.

521. Social Psychology. Three credit hours. One Quarter. Autumn and Spring. Three lecture hours each week. Required of undergraduate majors in the College of Arts. Prerequisite, Psychology 401 or 403. Mr. Wispé.

The nature of the social environment and the psychological structure of the social forces operating on the individual. Psychological description of the factors involved in the development of the social aspects of personality and the individuals sensitivity to the social environment. Description and evaluation of the methods of measurement and techniques of investigation of the social psychologist.

541. Psychology of Abnormal Behavior. Three credit hours. One Quarter. Winter and Spring. Three lecture periods each week. Observation clinics at Columbus State Hospital. Prerequisite, ten hours of psychology. Required of undergraduate majors in the College of Arts. Mr. Scodel.

Consideration will be given to the following topics: historical purview of abnormal behavior; criteria of normal and abnormal behavior; symptomatology; etiology of abnormal states; disturbing forces in personality; nosological formulations; therapy. Throughout the course emphasis will be on dynamic factors rather than description.

561. Psychology for Parenthood: Discipline and the Guidance of Child Behavior. One credit hour. Winter Quarter. One lecture hour each week. Lectures, readings, discussions. Open without prerequisite. This course may not be counted as satisfying prerequisites or for the major. Mr. English.

A course designed to meet some of the needs of prospective parents of both sexes. The fundamental psychological principles which enable parents to guide and control children's behavior. The effects of different patterns of parental behavior upon children's development.

581. Dormitory Advising. One to four credit hours. Autumn and Spring Quarters. May be repeated until a total of four credit hours is obtained. Prerequisite, Psychology 402 or 407 and the consent of the instructor. Miss Dunaway, Miss Snyder.

This course is for mature student assistants of Freshmen in the dormitories and in other organized residences for women. Under the supervision of the Dean of Women, students will have actual experience in (a) advising younger students in the same house concerning their

scholastic and social orientation; and (b) in the use and interpretation of records and scholarship as bearing on personal development. The psychological principles basic to such understanding and interpretation will be presented in lectures, discussions, and readings.

This course will be accepted as a professional elective in the College of Education.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Experimental Psychology. Three to five credit hours. Autumn Quarter. One lecture and two or more laboratory periods each week. Prerequisite, Psychology 402. Mr. Renshaw.

The laboratory course in experimental psychology for advanced undergraduates and graduate students. The experiments are selected both for general cultural values and for preparation for technical research in experimental psychology.

Psychology 601, 602, 603, comprise a unit year's work. Students may enter any Quarter.

602. Experimental Psychology. Three to five credit hours. Winter Quarter. One lecture and two or more laboratory periods each week. Mr. Renshaw.

603. Experimental Psychology. Three to five credit hours. Spring Quarter. One lecture and two or more laboratory periods each week. Mr. Renshaw.

605. Physiological Psychology. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 401-402 or 403. Mr. Meyer.

A study of some of the physiological correlates of psychological phenomena. The properties of integrated organ systems, with emphasis upon the characteristics of their elements. Psychosomatic abnormalities will be considered.

606. Advanced Physiological Psychology. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, Psychology 605. Mr. Meyer.

A study of further physiological correlates of psychological phenomena. Sensory and motor processes will be special topics for treatment.

NOTE: For additional courses related to physiological psychology, see: Physiology 638, Physiology of the Special Senses, taught by Mr. Ratoosh of the Psychology Department.

608. Educational Statistics: Elementary. Four credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and two two-hour laboratory periods each week. Students without credit for college algebra should obtain permission of the instructor. Mr. Toops, Mr. Wherry, Mr. Ratoosh.

A basic statistical course for students intending to conduct major or minor research. Frequency distributions, measures of central tendency and variability; construction of graphs and charts; interpretation of results in terms of probability; simple treatment of correlation. Extended practice in the use of calculating machines and computational devices.

609. Exceptional Children: General Survey. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lecture hours each week. Lectures, discussions and reports. Prerequisite, ten hours of psychology. Miss Cassidy.

An analysis of the physical, mental, and social factors which create exceptional behavior in children as deviations from the "normal" pattern. An overview of available diagnostic techniques for the identification of exceptional behavior. Typical methods of treatment.

610. Adolescence. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lectures each week. Prerequisite, Psychology 407 or 402. Mr. Horrocks.

A study of the outstanding characteristics of the adolescent boy or girl, the educational and social problems arising at this period, and means for dealing with these problems.

Not open to students who have credit for Psychology 510.

611. The Intellectual Deviate. Three credit hours. Winter Quarter. Two lecture hours and one conference hour each week. Lectures, reports, clinics, visits to institutions and schools. Prerequisite, Psychology 609 or permission of the instructor.

A study of the different types of children whose intellectual capacities require special understanding and treatment by parents, teachers, social workers, psychologists, and others. Particular attention given to the slow learning child and to the intellectually gifted child.

613. Mental and Educational Tests. Three credit hours. One Quarter. Winter and Spring. Two lectures and one conference and laboratory hour each week. Lectures, readings, classroom demonstrations, and special reports. Prerequisite, Psychology 402 or 407. Mr. Horrocks.

A broad basic course for teachers, and for students of psychology, clinical work, and sociology. The course will begin with a discussion of tests in school subjects, will then take up tests of general and special ability and "non-intellectual" traits, and will conclude with a general discussion of the construction of tests and their use in dealing with various practical and research problems.

615. Psycho-Educational Diagnosis and Treatment. Three credit hours. Autumn, Winter, and Spring Quarters. One lecture and four laboratory hours each week. May be taken for one to three Quarters with a maximum credit of nine hours. Prerequisite, Psychology 683 and permission of the instructor. Miss Rosebrook.

Practice in the giving and scoring of tests; clinical use of test materials in the diagnosis of special disabilities and difficulties in school work; clinical practice with remedial procedures.

622. Delinquent Children. Three credit hours. Spring Quarter. Three lecture hours each week. Lectures, reports, and visits to the Bureau of Juvenile Research. Prerequisite, thirteen hours of psychology. If this does not include Psychology 609, permission of the instructor must be obtained. Mr. Mussen.

The meaning and significance of delinquency; its psychological basis; causes and prevention. The home and school as factors determining delinquent behavior. The significance of psychological findings for juvenile court procedure. The present-day methods of dealing with the problem. The psychology of social conformity versus non-conformity, i.e., misconduct, whether technically delinquent or not.

623. Engineering Psychology. Three credit hours. Autumn Quarter. Lectures, demonstrations, discussion. Prerequisite, ten hours in psychology; or six hours in psychology plus nine hours in engineering courses covering motion and time study, quality control, or machine design. Mr. Fitts.

Application of the methods and techniques of experimental psychology to problems of designing equipment for efficient human use. Topics to be considered will include the following: display of information to the eye—visibility, legibility, check-reading; display of information to the ear—speech intelligibility, total signal systems; design of controls for efficient human use—placement, coding, mode of actuation; problems in the design of man-machine systems.

624. Perception. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 401-402. Mr. Renshaw.

The theories and experimental literature dealing with the perception of space, form, size, position, motion, brightness, hue, in vision and the problems in the cutaneous, auditory, olfactory, and gustatory modalities.

***625. Advanced Psychology of Motivation.** Three credit hours. Winter Quarter. Prerequisite, twenty hours of psychology, including Psychology 505 or 626 or their equivalent, or permission of the instructor. Mr. Wickens.

An evaluation of the experimental and theoretical material on: the physiological drives; the interrelation of drives; the development and maintenance of secondary motives; the principles of conditioning and learning needed for motivation theory; perception and motivation.

626. Psychology of Learning. Four credit hours. Autumn Quarter. Four lecturt and discussion hours each week. Prerequisite, Psychology 402 or its equivalent. Mr. Wickens.

The principles that underlie the discovery, fixation, and retention of new modes of human behavior. Emphasis is placed on theoretical formulation of the necessary conditions of learning and forgetting.

627. Introduction to Aviation Psychology. Three credit hours. Spring Quarter. Prerequisite, ten hours of psychology. Mr. Fitts.

A presentation of the psychological principles of perception, motivation, and acquisition of skill as they apply to the aircraft pilot. Topics to be discussed will include the following: (a) the

* Not given in 1956-1957.

critical requirements of various specialties in aviation; (b) selection problems and procedures; (c) training research; (d) the criterion problem-proficiency measurement; and (e) special psychophysiological problems encountered in flight.

Not open to students who have credit for Psychology 531.

628. Principles and Economy of Learning. Three credit hours. Autumn Quarter. Three lectures each week. Lectures, readings in monographs and journals, discussions. Prerequisite, permission of the instructor and sixteen hours of psychology or graduate standing. Mr. English.

The control of learning activities; memory and forgetting; transfer of training, generalization and thinking in relation to memory; the more elaborate types of learning such as are seen in school work. Special attention will be paid to recent experimentation and theories.

629. Systematic Psychology. Five credit hours. Spring Quarter. Five lectures each week. Prerequisite, Psychology 401-402 and permission of instructor. Mr. Ratoosh.

Scientific method in psychology. A consideration of scales of measurement, the use of models and problems of psychophysics.

631. Differential Psychology. Three credit hours. Winter Quarter. Three lecture hours each week. Prerequisite, fifteen hours of psychology or ten hours of psychology and five hours of professional educational subjects. Students who have not had a course in statistics must have the instructor's written permission to register. Mr. English.

Critical consideration of common ideas about ability and other traits. Historical development of measurement of individual differences. Resulting theories of intelligence, special abilities, and other traits. Relation of measurement of individual differences to systematic psychology.

632. The Psychology of Speech. Three credit hours. Autumn Quarter. Prerequisite, ten hours of psychology and ten hours of speech. Mr. Knower.

Psychological processes in speaking. The development of speech in the individual. Speech, personal and social adjustments. Vocal and visible symbolism. The psychology of language; semantics and thinking in speech situations. The experimental approach to the area will be emphasized.

633. The Psychology of the Audience. Two credit hours. Winter Quarter. Two lectures each week. Prerequisite, Psychology 679 and ten hours of speech. In special cases the speech prerequisite must be waived by permission of the instructor. Mr. Knower.

The psychological reaction to communication. Analysis of audiences, types of speaking, and speech situations. Procedures in listening. Principles of audience stimulation. Evaluation of speech content and effectiveness. Review of experimental studies on dissemination of information and propaganda techniques.

634. Criminal and Legal Psychology. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Burt.

Psychological factors in the determination of reliability of testimony; the technique of detecting crime and falsehood; responsibility; the relation of crime to mental disease or defect; the prevention of crime through environmental factors and heredity.

635. Psychology of Advertising. Three credit hours. One Quarter. Autumn and Spring. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Burt, Mr. Wispe.

The psychological principles involved in effective advertising, notably attention, memory and action, with the contributory factors of association, feeling, instinct, suggestion, and reasoning.

637. Industrial Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Burt.

The application of psychology to problems of industrial learning, adjustment of technical to mental factors, monotony, fatigue, environmental conditions, industrial unrest, morale, and accidents.

639. Psychology and Industrial Personnel. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Burt.

The application of psychology to problems of personnel. Selection and placement of employees by tests of intelligence and special ability. Trade tests, job analysis, and rating scales.

640. Educational and Vocational Guidance. Three credit hours. Winter Quarter. Prerequisite, Psychology 401-402 or 407. Mr. Toops.

A course dealing with the technique of evaluating psychological and related factors as a basis for making educational and vocational recommendations to individuals. The place of vocational and educational tests, previous record, and personality traits in determination of choice of occupation or course of study.

644. The Techniques of Human Motivation. Three credit hours. Spring Quarter. Three hours each week. Lectures, recitations, and assigned readings. Prerequisite, ten hours of psychology. Mr. Toops.

The psychological bases of initiation and improvement of work. The role of instinct, habit, custom and tradition, rationalization and psychopathy in motivation. The incentive values of self-ratings, competition, punishment, and such rewards as money, bonuses, participation and promotion, in relation to the capacities of individuals.

645. History of Psychology. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, sixteen hours in psychology. Mr. Kinzer.

The course aims to view modern psychological problems in the light of their historical antecedents. The development of psychology will be traced from the philosophical antecedents to its present status as a science and a profession. As far as possible assignments will involve reference to original sources.

646. Contemporary Viewpoints in Psychology. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, sixteen hours in psychology. Mr. Meyer.

A consideration of the contribution of various schools beginning with structuralists, functionalists, and behaviorists. Special attention will be given to the points of view of leading psychologists of the present. Such concepts as Gestalt, topology and operational definitions will be especially considered.

647. Theoretical Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 605. Mr. Meyer.

Organization of the data of physiological psychology into a consistent system with emphasis upon the problems posed by phenomena of sensory-motor correlation.

648. Prejudice and Personality. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, a course in social psychology or race relations such as Psychology 521, Sociology 622, 623, 604, or 605. Mr. Seeman.

A psychological approach to the understanding of hostile attitudes involved in group conflict. Personality dynamics in prejudice. Psychological effects of discrimination. Psychometric differences between groups as related to stereotypes. Psychological approaches to the reduction of intergroup hostility.

650. Minor Problems. One or more credit hours. All Quarters. Prerequisite, sixteen hours in psychology and the permission of the instructor. All instructors.

Investigation of minor problems in the various fields of psychology.

By permission of the chairman of the department and the Director of the Bureau of Educational Research, students enrolled in this course may obtain credit for research work done under the auspices of the Bureau staff.

***651. Performance Evaluation.** Three credit hours. Spring Quarter. Given in alternate years, alternating with Psychology 788. Two lectures and one two-hour laboratory period each week. Prerequisite, Psychology 608 and 639. Mr. Wherry.

A discussion of various objective and subjective devices for measuring productiveness and general effectiveness of job performance. The problems of criterion contamination; rationale and construction of various types of rating scales; and combination of criteria.

655. Comparative Psychology. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 504, 505, 506 or twenty hours of psychology or zoology. If twenty hours of zoology are used, a course in animal behavior must be included and permission of the instructor must be obtained. Mr. Ratoosh.

The principles of animal behavior in relation to human behavior. A study of the similar-

* Not given in 1956-1957.

ities and differences in the behavior of animals and of humans and the explanation of these similarities and differences, with special reference to those principles definitely involved in the organism's mode of adjusting to its environment.

***656. Advanced Comparative Psychology.** Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, Psychology 655. Mr. Meyer.

A continuation of Psychology 655, devoted largely to contemporary literature in comparative psychology.

659. Personnel Psychology. Three credit hours. One Quarter. Winter and Spring. Two lectures and one two-hour laboratory period each week. Prerequisite, ten hours of psychology. Mr. Kinzer, Mr. Burnett.

A course designed for students who are preparing for positions in personnel work. Comparative study of personnel programs and procedures.

663. Psychology of Childhood. Five credit hours. Autumn Quarter. Four class meetings a week and directed study of a child throughout the Quarter. Graduate students should consult the instructor before enrolling in this course. Prerequisite, Psychology 402, 403 or 407. Enrollment limited to forty. Mr. English, Mr. Horrocks.

The psychological development of the child from three to twelve years. Effects of the school and out-of-school activities on development. Analysis of significantly psychological problems involved in curricular activities. Provision by school and other social agencies for the psychological needs of the child.

Each student makes a case study of a child, observing his behavior at home, in school, in varied social situations; and obtaining information about the child from parent, teacher, and other sources. One fifth of the time of the course is spent in this field study and in making a detailed report thereon.

667. Psychology of Music. Three credit hours. Winter Quarter. Two lectures and one laboratory period each week. Prerequisite, Psychology 407 and Music 530. Mr. M. E. Wilson.

The contribution of rhythm, harmony, tone color, form, familiarity, voice and tactual association to the emotional experience in music. Analysis and measurement of musical talent. Psychological factors in musical interpretation and in the teaching of music.

668. Principles of Gestalt Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 402 or 407. Mr. Renshaw.

A survey of the experimental work which supplied the data for the Gestaltist. A study of the basic dynamic principles which constitute the Gestalt system. Application of these principles to perception, learning, thinking, and emotion.

670. Psychology Problems of Adult Life. Three credit hours. Spring Quarter. Mr. Pressey.

A survey of the important recent psychological literature on changes in capacity for learning through the adult years and into old age, changes in incentives and interests throughout these years, emotional development and orientation of adults, psychological problems of work adjustment, adult and parent education, leisure.

671. Principles of Treating the Problem Child. Three credit hours. Winter Quarter. Three lecture hours each week with lectures, recitations, reports. Prerequisite, thirteen hours of psychology. If this does not include Psychology 609, permission of the instructor must be obtained. Mr. Rotter.

For prospective teachers, counselors and clinicians. A survey of treatment procedures and resources. Methods used in dealing with behavior and personality problems. The flexible use of school environment and community resources, methods of altering attitudes of parent and child, and direct treatment approaches.

***672. Psychological Aspects of Biography.** Three credit hours. Spring Quarter. One two-hour meeting and one conference hour each week. Prerequisite, Psychology 402 or 407. Mr. Pressey.

The course will make use of the very rich biographical and autobiographical material now available in an effort to understand developmental trends throughout the life-span and with special reference to the adult years and the older ages.

* Not given in 1956-1957.

674. Programs of the Dean of Women. One credit hour. Autumn, Winter, Spring. May be repeated until a total of three credit hours is reached. One one-hour discussion each week. Consent of the instructor must be obtained. Mrs. Conaway, Miss Snyder.

Investigation of the psychological principles and practices underlying a student personnel program for college women.

676. Advanced Educational Psychology. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, Psychology 402 or 407 or permission of the instructor. Mr. Pressey.

A course in advanced educational psychology, giving a critical appraisal of the implications for education of modern psychological findings.

***677. Experimental Social Psychology.** Four credit hours. Spring Quarter. Four laboratory hours and two lectures each week. Prerequisite, Psychology 521 or equivalent and 608. Mr. Wispé.

A laboratory course in the methods of experimental social psychology. Typical experiments in such social psychological areas as attitude scaling, suggestion, social perception.

678. Psychology of Personality. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Mussen.

This course will consider the individual both as a social and biological unit, relating each group of factors to the development of personality. Particular attention will be given to the major theories of personality and to empirical research on the development and measurement of personality traits.

679. Psychology of Public Attitudes. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 521 and Psychology 508, or equivalent. Mr. Wispé.

The psychological theory and the measurement of social attitudes. A study of the psychological determinants of attitudes. Emphasis upon problems of definition, analysis, and measurement. Techniques in the quantification of attitudes through scale, poll, and other procedures.

680. Educational Tests and Measurements. Three credit hours. Spring Quarter. Assigned readings and reports. Open to seniors and graduate students of experience with permission of the instructor in charge. Mr. Heck, Mr. Pressey, Mr. Horrocks.

A service course for those majoring in Elementary and Secondary Education and School Administration. The course will consider selection of tests and organization of testing programs for elementary and secondary schools; the use of tests in classification, diagnosis, prognosis, and educational guidance; the principles of teacher-made tests; and effect of testing on marketing systems.

683. Psychology of Reading. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lecture and discussion hours each week. Prerequisite, Psychology 402 or 407. Mr. Robinson, Mr. Kinzer.

Psychological analysis of the reading process. The relationship of this to teaching and remedial methods. Discussion of remedial reading techniques.

684. Psychology of Counseling. Three credit hours. One Quarter. Autumn and Winter. Prerequisite, thirteen hours of psychology. Mr. Robinson, Mr. Kinzer.

Assumptions and facts fundamental to counseling; factors in the interview situation; nature of counseling techniques; resources in counseling; relation of counseling to other personnel procedures.

687. Psychological Optics. Five credit hours. Spring Quarter. Lectures, laboratory demonstrations, and practice. Prerequisite, Psychology 401 and 402. Mr. Renshaw.

The measurement and diagnosis of the fundamental visual skills; reading and form perception problems; visual training instruments and techniques.

689. Occupational Information. Three credit hours. One Quarter. Autumn and Winter. Lectures, discussions, field trips. Prerequisite, senior standing and permission of the instructor. Mr. Shartle, Mr. Fletcher.

* Not given in 1956-1957.

A survey of occupations and occupational information for guidance counselors and employment interviewers; study of the literature on occupations and occupational information; writing of occupational analyses; field trips to places of employment to observe workers at work; finding, filing and use of occupational information for employment and guidance purposes.

690. Mental Hygiene for Professional Workers. Three credit hours. Spring Quarter. Prerequisite, Psychology 402 or 407.

The conditions under which the individual makes the optimum social adjustment; standards of social adjustment in groups; the pre-determinants of maladjustment and prevention of maladjustment. For teachers, personnel and guidance workers, social workers, psychologists, occupational therapists, and other professional groups.

693. Use of Tabulating Machine Techniques in Research. Two credit hours. Winter Quarter. One lecture and one laboratory period each week. Prerequisite, Psychology 608, Economics 522, or an equivalent course in statistics, or permission of the instructor. Mr. Toops.

Methods of large-scale researches involving tabulating machines and other specialized technical devices. Coding of data; operation of sorting and tabulating machines.

695. Clinical Psychology. Three or five credit hours depending on whether laboratory is taken. Spring Quarter. Three lectures or discussions and two laboratory periods each week. Prerequisite, thirteen hours of psychology, three of which must be on the "600" level. Mr. Kelly.

Discussion of the field of clinical psychology; its methods, its problems and its use in guidance, education, hospitals, industry, and other areas.

703. Special Topics in Psychology. Three credit hours. Autumn, Winter, Spring Quarters. Lectures and discussions. Prerequisite, fifteen Quarter-hours of psychology courses in the "600" group or above and permission of the instructor. May not be elected more than twice. All professors.

The topics will vary from Quarter to Quarter and will be announced at least one month in advance.

704. Tests and Measurements in Speech Education. Three credit hours. Spring Quarter. Prerequisite, Psychology 632 and Psychology 613. Mr. Fotheringham.

Problems involved in securing and using available and suitable tests and testing procedures in speech. Diagnosis and evaluation. Rating and rater training. Building general and specialized speech tests. Administration and scoring of speech tests. Interpreting test data in this field.

705. Factor Analysis. Three credit hours. Winter Quarter. Given in alternate years, alternating with Psychology 706. Prerequisite, Psychology 608 and 814 or the permission of the instructor. Mr. Wherry.

The relation of factor analysis to regression and correlation theory; historical review of the principal factor methods and theories; the extraction of factors singly and simultaneously; residuals and reflection; iteration and correction; rotation for meaningfulness; inverse analysis; setting up and interpreting factorial studies.

***706. Mathematical Psychology.** Three credit hours. Winter Quarter. Given in alternate years, alternating with Psychology 705. Prerequisite, courses in experimental-theoretical psychology such as 601, 624, 625, 626, 646, or statistical psychology such as 814, 816. Mr. Wherry.

An introduction to the use of mathematics in rational theory building. This course will discuss various mathematical systems of psychology, including examples from the area of the nervous system, attention, discrimination, perception, intelligence, learning, drives, emotions, vision, and selected problems from social psychology.

***713. Laboratory in Psychological and Educational Measurement.** Two credit hours. Winter Quarter. Four laboratory hours each week. This course may be repeated until a maximum of six hours has been earned. Prerequisite, Psychology 613 or 680 or equivalent and permission of the instructor. Laboratory demonstrations, projects, field work under supervision, and practice in constructing, administering, scoring and interpreting tests. Mr. Horrocks, Mr. Fotheringham.

A laboratory practicum in the construction and use of psychological and educational measuring instruments, including measures of aptitude, achievement, intelligence, personality, interest and attitude. Students will construct and administer tests and other measures in actual programs in scholastic and industrial situations. Students will familiarize themselves with a wide range of existing measuring instruments in psychology and education and will appraise them critically with a view to their use and revision. Consideration will be given to statistical techniques of construction and appraisal. Students will assist, under supervision, in setting up and appraising testing programs.

718. The Psychology of Group Psychotherapy. Two credit hours. One Quarter. Autumn and Spring. Two class periods each week. If Psychology 671 has not been taken, permission of the instructor must be obtained. Mr. Scodel, Mr. Pepinsky.

Primarily for students who may use psychological group methods in professional work. General principles of group therapy and specific methods with children and adults described and evaluated.

782. Laboratory in Psychology of Campus Group Activities. Two credit hours. One Quarter. Autumn, Winter, Spring. May be taken for one or more Quarters with a maximum credit of six hours. One two-hour lecture, discussion and demonstration period and four hours of practical experience in residence halls, student government and other organized campus groups. General prerequisites must include Psychology 659, 674, 684, and 781, prior or concurrent, and permission of the instructor.

The course offers an opportunity for mature students to gain practical experience in working with the residence hall program and other organized campus group activities. Techniques and problems of different types of groups will be considered together with the role of the adviser. The culture matrix of the university community will be discussed in the class sessions.

788. Laboratory in Employment Techniques. Three credit hours. Spring Quarter. This course may be repeated until nine hours have been earned. Six laboratory hours each week. Prerequisite, Psychology 608; six hours selected from Psychology 613, 637, 639, 651, 684, 689; and permission of the instructor. Mr. Wherry, Mr. Fletcher.

Supervised practice in the application of psychology to employment problems and in the use and construction of psychological techniques for hiring employees. Actual planning and administration selected from the areas of the job and worker analysis, employee interviewing, application blanks, testing, job classification, placement, and evaluation. Work may be carried on either in the laboratory or, on occasion, in selected business or manufacturing establishments or employment offices.

Not open to students who have credit for Psychology 638 or 688.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC SPEAKING (See Speech)

RADIO

Office, 19 Derby Hall

COORDINATOR: PROFESSOR TYLER

SUPERVISORY COMMITTEE: PROFESSORS DAMERON, SUMMERS, AND WEIGEL,
ASSOCIATE PROFESSORS HIGGY AND WAGNER, ASSISTANT PROFESSOR EWING

Except for Radio 405 and Radio 655, complete description of these courses with prerequisites will be found in the listings of the designated departments in the appropriate college bulletins.

405. Introduction to Radio. Two credit hours. One Quarter. Autumn, Winter, Spring. Recommended for all undergraduate students as prerequisite for all radio courses in Speech, Music, Education, Journalism, and Business Organization; required as prerequisite for students majoring in radio in any department. All Radio Instructors.

An introduction to the whole field of non-engineering radio; history, structure, regulations, and support of broadcasting; organization and function of the individual station; fields of specialization, their potentialities and limitations; public responsibilities of radio as mass communication; the radio listeners. Lectures, discussion, observation, and individual problems.

Business Organization 520. Radio Station Management. Three credit hours. Spring Quarter.

Speech 560. Radio Speech. Three credit hours. One Quarter. Autumn, Winter, Spring.

Speech 565. Radio Program Production. Three credit hours. One Quarter. Winter and Spring.

Not open to students who have credit for Speech 658.

Speech 566. Radio Laboratory Practice. One credit hour each Quarter. Autumn, Winter, Spring.

Not open to students who have credit for Speech 661.

Speech 571-572. Radio and Television Program Departments. One credit hour each Quarter. Winter and Spring Quarters.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Business Organization 718. Broadcast Advertising Media. Three credit hours. Winter Quarter.

Education 601. Radio and Television in Education. Three credit hours. Autumn Quarter.

Journalism 605. Writing and Editing Radio and Television News. Three credit hours. One Quarter. Autumn, Winter, Spring.

Journalism 606. Advanced Radio and Television News Writing and Editing. Two credit hours. One Quarter. Autumn, Winter, Spring.

Journalism 607. Special Radio and Television News Problems. Three credit hours. Spring Quarter.

Journalism 614. Law of the Press, Radio, and Television. Five credit hours. One Quarter. Autumn and Winter.

Speech 652. Broadcast Programs and Audiences. Three credit hours. One Quarter. Autumn, Winter, Spring.

Speech 654. Radio Writing. Three credit hours. One Quarter. Autumn and Spring.

Speech 662. Radio and Television Drama. Three credit hours. One Quarter. Winter and Spring.

Speech 666. Advanced Radio Production-Directing. Three credit hours. Autumn Quarter.

Speech 670. Radio and Television Program Planning. Two credit hours. One Quarter. Autumn and Winter.

Speech 760. Radio and Television Program Policies. Two credit hours. Spring Quarter.

Speech 764. Writing for Television. Three credit hours. Winter Quarter. Not open to students who have credit for Speech 663.

Speech 768. Television Scenery and Design. One credit hour. Autumn Quarter.

SUPERVISED EXPERIENCE AND SPECIAL PROBLEMS

655. Radio Broadcasting Problems. One to three credit hours. Autumn, Winter, and Spring Quarters. Three laboratory hours each week for each credit hour. This course may be repeated until three credit hours are obtained. Prerequisite, Radio 405, junior standing in any college of the University and permission of the station director. Station WOSU staff.

Supervised experience at Station WOSU.

Business Organization 799h. Special Problems in Business Organization. (Radio Advertising.) One to three credit hours. Autumn, Winter, and Spring Quarters.

Education 600j. Minor Problems. (Radio and Television Education) One to four credit hours. Autumn, Winter, and Spring Quarters.

Education 800j. Seminar in Education. (Radio and Television) Two to five credit hours. Autumn, Winter, and Spring Quarters.

Journalism 609-610-611. Advanced Laboratory Practice. (Radio) Two credit hours. Autumn, Winter, and Spring Quarters.

Journalism 625. Journalism Practice. (Radio) Two to five credit hours. All Quarters.

Journalism 802-803-804. Seminar in Journalism. (Radio) Three to five credit hours. Autumn, Winter, and Spring Quarters.

Speech 700. Minor Problems in Speech. (Radio) One to five credit hours. All Quarters.

Speech 860. Seminar in Radio and Television Programming. Two to five credit hours. Autumn, Winter, and Spring Quarters.

RHETORIC AND ENGLISH LANGUAGE

(See English)

ROMANCE LANGUAGES AND LITERATURES

Office, 111 Derby Hall

PROFESSORS ROCKWOOD, HAVENS, DEMOREST, MOORE (EMERITUS), SCHUTZ, AND WARDROPPER, MONROE (EMERITUS), ASSOCIATE PROFESSORS ARMITAGE, ROGERS, DOOLITTLE, PRADAL, AND BORELLI, ASSISTANT PROFESSORS MEIDEN, ROZELL, CARLUT, SAPON, BLANCO, AND AVALLE-ARCE, HAMILTON (EMERITUS), MR. ROBERTSON, MR. ANGELO, MRS. PRADEL, MRS. BORELLI, MR. BLEND, MR. HOLDHEIM, MR. MARCIANTI, MR. McRILL, MR. PLATT, MR. SCHOLBERG, MR. BOWEN, MISS WALSH (EMERITUS), AND ASSISTANTS

The undergraduate courses offered in French and Spanish are divided into elementary (401-402), intermediate (403-404-410-517 and 600 courses) and advanced (all 600 courses) courses.

JUNIOR DIVISION—FRENCH AND SPANISH

(a) For those who enter with no previous French or Spanish, the following outline course is recommended in French or Spanish:

First Year: French or Spanish 401-402-403

Second Year: French or Spanish 404-410-517

(b) For those who enter with two years of high school French or Spanish, the following outline course is recommended (but see statement on Placement Tests below):

First Year: French or Spanish 403-404-410 or 517.

Second Year: French or Spanish 517, 520, Spanish 530, a French or Spanish 600 course on the recommendation of the department.

(c) Those who enter with three years of high school French or Spanish (validated by the Placement Test) should first take French or Spanish 404, then French or Spanish 410 or 517; those who enter with four years of high school French or Spanish (validated by the Placement Test) should begin with French or Spanish 410 or 517. These courses should be followed by French or Spanish 517, 520, Spanish 530, and, on the recommendation of the Department, by French or Spanish 600 courses.

SENIOR DIVISION

The advanced undergraduate courses offered in French and Spanish fall into two general groups. Students may emphasize one or both of these lines of study.

FRENCH

(1) Courses in French Literature: 603, 604, 616, 617, 618, 634, 640, 646, 651.

(2) Courses in French Language: 619, 628, 632, 635, 636, 637, 638.

SPANISH

(1) Courses in Spanish Literature: 607, 608, 610, 611, 613, 614, 615, 616, 618, 631, 639, 640, 641, 645.

(2) Courses in Spanish Language: 605, 617, 620, 623.

A major in the Department of Romance Languages may consist of not less than forty hours of courses in the department on the 500 level or above. Courses in related fields may be approved by the student's adviser.

PLACEMENT TESTS

Placement tests are required of all students who continue the study of French or Spanish in the University in courses 402, 403, 404, 410, or 517. The purpose of the test is to place each student in that course for which he is best fitted. Placement tests will be given at the beginning of each Quarter.

ADVANCED STANDING

Qualified students in foreign languages are eligible to take proficiency examinations for advanced standing.

LANGUAGE CLUBS

These clubs are student organizations conducted by the department. Meetings are held fortnightly. It is the practice of these clubs to stage plays in foreign languages.

LANGUAGE LISTENING CENTER

A Language Listening Center with recordings of all basic material in French and Spanish 401 and 402 and selected material in other courses is available in Derby Hall, Room 12.

Students in all courses are urged to make use of these facilities.

FRENCH

401. Elementary French. Five credit hours. One Quarter. Autumn, Winter, Spring. Sections in this course are limited to twenty-five students. All instructors.

The elements of French grammar with abundant oral and written exercises. Special attention to ear training and oral practice. Elementary reading based of French geography, history, customs, and manners.

This course may not be taken simultaneously with Spanish 401-402, Italian 401-402, or by students who are not eligible to take English 416.

402. Elementary French. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 401. Sections in this course are limited to twenty-five students. All instructors.

The elements of French grammar with abundant oral and written exercises. Development of conversational skill. Reading, vocabulary building, attention to French idioms.

This course may not be taken simultaneously with Spanish 401-402, Italian 401-402.

403. Intermediate French. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 402. Sections in this course are limited to twenty-five students. All instructors.

Review of salient points of elementary grammar, attention to French idioms. Reading of short stories, plays, and novels.

404. Intermediate French. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 403. Sections in this course are limited to twenty-five students. All instructors.

Reading of French plays, short stories and novels. Emphasis on oral practice and French idioms.

405. Reading of French. No credit. Autumn, Winter, and Spring Quarters. No prerequisite. Not accepted as a prerequisite for any other course in this department. Three meetings each week.

This course is open only to graduate students who wish to acquire a reading knowledge of French, and is designed primarily for students who have had no formal preparation in this language.

410. Elementary French Conversation and Composition. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 404. This course is conducted in French. Sections are limited to twenty students.

Intensive practice in oral and written French, based on texts and periodicals concerned with French life of today. Grammar and idiom review.

517. Introduction to Modern French Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 404.

Rapid reading and discussion of French literary movements and masterpieces of the Nineteenth Century and their relation to Modern France.

Not open to students who have credit for French 417.

This course may be used in partial fulfillment of the literature requirement of the humanities group for the B.A. and B.Sc. curricula in the College of Arts and Sciences.

518. Review Grammar and Composition. Two credit hours. Spring Quarter. Prerequisite, French 410.

Review of French grammar, composition on assigned topics and practice in translation.

521. Intermediate French Conversation and Composition. Part I. Two credit hours. Autumn Quarter. Prerequisite, French 410.

Vocabulary building, practice in speaking French, conversation and composition dealing with various aspects of French life.

522. Intermediate French Conversation and Composition. Part II. Two credit hours. Winter Quarter. Prerequisite, French 521.

Vocabulary building, practice in speaking French, conversation and composition dealing with various aspects of French life.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Students intending to major in French in the College of Arts and Sciences, and in the Graduate School are urged to elect the following courses outside the department: Latin 627, Classical Languages 520, 521, 522, Philosophy 501, 502, 503, 515, 620, 621, 622, German 705, History 624-625, Fine Arts 564, 673.

***603. The Romantic Period in French Literature, 1800-1950.** Five credit hours. Autumn Quarter. Prerequisite, French 417 or 517. Given biennially, alternating with French 604. Mr. Demorest.

The development of Romanticism and rise of realism in the first half of the Nineteenth Century in the novel, poetry, and drama.

604. French Literary Currents, 1850-1914. Five credit hours. Autumn Quarter. Given biennially, alternating with French 603. Prerequisite, French 417 or 517. Mr. Demorest.

* Not given in 1956-1957.

Realism, naturalism, and the movements of reaction in the novel and drama. The Parnassians and the Symbolists in poetry. Modern French literary critics.

***616. French Literature of the Renaissance.** Five credit hours. Spring Quarter. Given biennially, alternating with French 617. Prerequisite, French 417 or 517. Mr. Schutz.

Selections from Marot, Rabelais, the Pleiade, and Montaigne as they reflect the age of humanism and illustrate the transition from medieval to modern forms and ideas.

617. French Classicism, 1600-1715. Five credit hours. Winter Quarter. Given biennially, alternating with French 616. Prerequisite, French 417 or 517. Mr. Rockwood.

The formation of the classic spirit. The perfection of dramatic form and the Seventeenth Century portrait of man. Selected works of Malherbe, Descartes, Pascal, Le Bruyère, Boileau, Corneille, Molière, and Racine.

618. French Literature of the Enlightenment. Five credit hours. Spring Quarter. Given biennially, alternating with French 640. Prerequisite, French 417 or 517. Mr. Havens.

A study of the ideas of the Eighteenth Century in their relation to modern times. Special emphasis on Montesquieu, Voltaire, Diderot, and Rousseau.

619. French Translating. Three credit hours. Spring Quarter. Prerequisite, French 410 and 520. Mr. Havens.

Translating from French to English and from English to French. This course is helpful in preparing for teaching or for military, diplomatic, or other special service where exact linguistic knowledge is needed.

628. Modern French Syntax. Five credit hours. Winter Quarter. Prerequisite, French 410 or equivalent. Mr. Meiden.

Systematic review of French grammar with composition and other exercises, based on contemporary authors. Modern tendencies in syntactic analysis.

***629. History of the French Language.** Three credit hours. Mr. Schutz.

A survey from Roman times to the present with emphasis on those cultural and social factors which helped make the French language what it is today. The relations of language to literature. Introduction to modern principles and methods in linguistics.

Lectures, readings, reports.

632. French Pronunciation. Five credit hours. Autumn Quarter. Required for Education 536. Prerequisite, French 410 or equivalent. The class is limited to twelve. Mr. Rockwood.

The formation of French sounds. Lectures, with exercises in the use of symbols of the International Phonetic Association. A study of the rules of French pronunciation and diction. Drill in the reading of French.

Not open to students who have credit for French 627.

634. Contemporary French Drama. Three credit hours. Autumn Quarter. Lectures, collateral reading, and reports. Prerequisite, French 417 or 517. Mr. Carlut.

Study of plays by Lenormand, Rostand, Claudel, Giraudoux, Cocteau, Montherlant, Anouilh, Sartre, Camus and others. The different theaters and directors from Copeau to the present day.

635. La Civilisation française jusqu'à la Révolution. Three credit hours. Winter Quarter. Prerequisite, French 520. This course is conducted in French. Alternates with French 636. Mr. Carlut.

A study of the major developments of French culture down to the Nineteenth Century. The course is designed to give the student greater facility in understanding, speaking, and writing French.

***636. La Civilisation française depuis la Révolution.** Three credit hours. Winter Quarter. Prerequisite, French 520. This course is conducted in French. Alternates with French 635. Mr. Carlut.

* Not given in 1956-1957.

The principal object of the course is to increase the student's facility in understanding, speaking, and writing French. The material for discussion is drawn from the life, institutions, and culture of Nineteenth and Twentieth Century France.

*637. French Diction. Two credit hours. Spring Quarter. Prerequisite, French 632. The class is limited to twelve. Mr. Rockwood and assistant.

Analysis and preparation of interpretive reading of prose and verse.

†638. Advanced Spoken and Written French. Three credit hours. Spring Quarter. Prerequisite, French 410 and 520. Mr. Havens.

Intensive practice in speaking and writing French. Based on contemporary usage.

†639. Explication de textes. Three credit hours. Prerequisite, French 417 or 517 or equivalent.

Works to be chosen by instructor.

*640. Contemporary French Literature. Five credit hours. Winter Quarter. Prerequisite, French 417 or 517. Mr. Demorest.

From Dadaism to Existentialism. Literary currents and their significance, with special attention given to the novel. Proust, Gide, Duhamel, Romain, Mairaux, Colette, Maurias, Bernanos, Giono, Saint-Exupéry, Camus, Sartre, and others.

†645. French Literature. Three to five credit hours. All Quarters. Five meetings each week. Students may secure credit under this course number not to exceed fifteen hours. Prerequisite, French 417 or 517 and junior standing. Senior staff.

Under this course number senior members of the department will conduct advanced studies of significant topics that are covered only briefly if at all in other offerings of the department.

647. Romance Linguistics. Three to five credit hours. Spring Quarter. Five meetings each week. Students may secure credit under this not to exceed fifteen hours. Elective. Prerequisite, French or Spanish and 517 and/or 520, or its equivalent in a major Romance Language, and junior standing.

Under this course number the senior staff will conduct studies of linguistic problems not otherwise provided for and also minor Romance Language and dialect studies.

See Spanish 647.

*651. Modern French Poetry. Three credit hours. Autumn Quarter. Lectures, discussions, and reports. Prerequisite, French 417 or 517. Mr. Doolittle.

Sources and processes of poetic creation as exemplified in selected works of French poets, from Baudelaire to the present, with emphasis on the Twentieth Century.

670. French Literature in English Translation. Five credit hours. Autumn Quarter. Lectures, collateral reading, and reports. Prerequisite, junior standing. Mr. Havens.

A survey of French masterpieces in English translation from Montaigne to Proust with special reference to their bearing on English or American literature.

This course may be used in partial fulfillment of the literature requirement of the humanities group for the B.A. and B.Sc. curricula in the College of Arts and Sciences. This course may not be counted toward a French major.

701. Minor Problems in French. One to five credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, permission of the instructor. Professors, Associate Professors, and Assistant Professors.

705-706-707. Honors Courses in French. Three to ten credit hours. Autumn, Winter, and Spring Quarters. Work in conference, library, or phonetics laboratory. Prerequisite, senior standing, with a record of "A" in at least half of the French courses and an average of "B" in the remainder, and the approval of the department. Professors and Assistant Professors.

This course is intended to give undergraduates of special aptitudes a greater opportunity to do independent study than is possible in the ordinary course.

Not open for graduate credit.

† Not given during the academic year, 1956-1957.

* Not given in 1956-1957.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 692.

ITALIAN

401. Elementary Italian. Five credit hours. Autumn Quarter. Sections in this course are limited to twenty-five students. Mr. Borelli.

The elements of Italian grammar with abundant oral and written exercises. Special attention to ear training and oral practice. Elementary reading based on Italian geography, history, customs, and manners.

This course may not be taken simultaneously with French 401-402, Spanish 401-402, or by students who are not eligible to take English 416.

402. Elementary Italian. Five credit hours. Winter Quarter. Prerequisite, Italian 402. Mr. Borelli.

The elements of Italian grammar with abundant oral and written exercises. Development of conversational skill. Reading, vocabulary building, attention to Italian idioms. Modern Italian prose.

This course may not be taken simultaneously with French 401-402, Spanish 401-402.

***503. Modern Italian Literature, 1750-1850.** Five credit hours. Spring Quarter. Prerequisite, Italian 402. Given in alternate years. Mr. Borelli.

504. Modern Italian Literature, 1851-1900. Five credit hours. Winter Quarter. Prerequisite, Italian 402. Given in alternate years. Mr. Borelli.

Rovetta, Carducci, Giacosa, Fogazzaro.

505. Modern Italian Literature, 1901——. Five credit hours. Autumn Quarter. Prerequisite, Italian 402. Mr. Borelli.

Masterpieces of the Twentieth Century. Especially: D'Annunzio, Pirandello, Bacchelli, Montale.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

***611. Dante's Life and Works.** Three credit hours. Winter Quarter. Given in alternate years. Prerequisite, Italian 503, 504, or 505. Mr. Borelli.

Reading of the *Vita Nuova* and the *Inferno*.

647. Romance Linguistics. Three to five credit hours. Spring Quarter. Five meetings each week. Students may secure credit under this not to exceed fifteen hours. Elective. Prerequisite, French or Spanish 517 and/or 520, or its equivalent in a major Romance Language, and junior standing.

Under this course number the senior staff will conduct studies of linguistic problems not otherwise provided for and also minor Romance Language and dialect studies.

See Spanish 647.

701. Minor Problems in Italian. One to five credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, permission of the instructor. Mr. Borelli.

PORTUGUESE

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

647. Romance Linguistics. Three to five credit hours. Spring Quarter. Five meetings each week. Students may secure credit under this not to exceed fifteen hours. Elective. Prerequisite, French or Spanish 517 and/or 520, or its equivalent in a major Romance Language, and junior standing.

Under this course number the senior staff will conduct studies of linguistic problems not otherwise provided for and also minor Romance Language and dialect studies.

See Spanish 647.

* Not given in 1956-1957.

***701. Minor Problems in Portuguese.** Three to five credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, permission of the instructor. Mr. Schutz, Mr. Sapon.

SPANISH

401. Elementary Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Sections in this course are limited to twenty-five students. All instructors.

The elements of Spanish grammar with abundant oral and written exercises. Especial attention to ear training and oral practice. Elementary reading based on Spanish American geography, history, customs, and manners.

This course may not be taken simultaneously with French 401-402, Italian 401-402, or by students who are not eligible to take English 416.

402. Elementary Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Spanish 401. Sections in this course are limited to twenty-five students. All instructors.

The elements of Spanish grammar with abundant oral and written exercise. Development of conversational skill. Reading, vocabulary building, attention to Spanish idioms.

This course may not be taken simultaneously with French 401-402, Italian 401-402.

403. Intermediate Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Spanish 402. Sections in this course are limited to twenty-five students. All instructors.

Review of salient points of elementary grammar, attention to Spanish idioms. Reading of short stories, plays and novels.

404. Intermediate Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Spanish 403. Sections in this course are limited to twenty-five students. All instructors.

Reading of Spanish plays, short stories, and novels. Emphasis on oral practice and Spanish idioms.

407. Reading of Spanish. No credit. Autumn and Spring Quarters. Three meetings each week. No prerequisite. Not accepted as prerequisite for any other course in this department.

This course is open only to graduate students who wish to acquire a reading knowledge of Spanish, and is designed primarily for students who have had no formal preparation in this language.

410. Elementary Spanish Conversation and Composition. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Spanish 404. This course is conducted in Spanish. Sections limited to twenty students.

Intensive practice in oral and written Spanish, based on texts and periodicals concerned with Contemporary Spain and Spanish America. Grammar and idiom review.

517. Introduction to Modern Spanish Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Spanish 404.

Reading and discussion of important modern works.

Not open to students who have credit for Spanish 417.

This course may be used in partial fulfillment of the literature requirement of the humanities group for the B.A. and B.Sc. curricula in the College of Arts and Sciences.

518. Review Grammar and Composition. Two credit hours. Spring Quarter. Prerequisite, Spanish 410.

Review of Spanish grammar; composition on assigned topics and practice in translation.

521. Intermediate Spanish Conversation and Composition. Part I. Two credit hours. Autumn Quarter. Prerequisite, Spanish 410.

Vocabulary building, practice in speaking Spanish, conversation and composition dealing with various aspects of Spanish and Spanish American life.

* Not given in 1956-1957.

522. Intermediate Spanish Conversation and Composition. Part II. Two credit hours. Winter Quarter. Prerequisite, Spanish 521.

Vocabulary building, practice in speaking Spanish, conversation and composition dealing with various aspects of Spanish and Spanish American life.

530. Masterpieces of Spanish Literature. Five credit hours. Autumn Quarter. Prerequisite, Spanish 417 or 517. Mr. Rozzell.

Detailed study of *Poema del Cid*, the *Romances*, *La Celestina*, *Lazarillo de Tormes*, *El burlador de Sevilla*.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Students intending to major in Spanish in the College of Arts and Sciences and in the Graduate School may elect the following courses outside of the department: Latin 627, Classical Languages 520-521-522, Philosophy 515, 601, 602, 603, 604, German 705, History 645-646, and Fine Arts 674-675.

605. Advanced Composition and Conversation. Three credit hours. Spring Quarter. Prerequisite, Spanish 520 and either 530 or "600" course in Spanish literature. Mr. Blanco.

This course is conducted wholly in Spanish. Its subject matter will be for the most part the history, customs and manners of Spain and Spanish America.

607. The Spanish Novel of the Nineteenth Century. Five credit hours. Autumn Quarter. Four meetings each week, a fifth at the option of the instructor. Given biennially, alternating with Spanish 631. Prerequisite, Spanish 417 or 517. Mr. Blanco.

A study of the development of the modern Spanish novel, with particular attention to the works of Pérez Galdós.

608. The Modern Spanish Novel of the Twentieth Century. Five credit hours. Winter Quarter. Four meetings each week, a fifth at the option of the instructor. Given biennially, alternating with Spanish 610. Prerequisite, Spanish 417 or 517. Mr. Pradal.

Works of Pío Baroja, Valle Inclán, Pérez de Ayala, Ramón Sender, and others.

610. Modern Spanish Drama. Five credit hours. Winter Quarter. Four meetings each week, a fifth at the option of the instructor. Given biennially, alternating with Spanish 608. Prerequisite, Spanish 417 or 517. Mr. War-dropper.

The development of the Spanish drama in the late Nineteenth and Twentieth Centuries. Works of Benavente, Valle Inclán, Usigli and García Lorca will receive special emphasis. Lectures, collateral reading, and reports.

***611. Drama of the Golden Age.** Five credit hours. Winter Quarter. Four meetings each week, a fifth at the option of the instructor. Given in alternate years. Prerequisite, Spanish 417 or 517.

An intensive study of a limited number of plays of the representative dramatists, particularly Lope, Tirso, Alarcón, and Calderón. Lectures, collateral reading, discussion, and reports.

613. The Picaresque Novel. Five credit hours. Spring Quarter. Four meetings each week, a fifth at the option of the instructor. Prerequisite, Spanish 417 or 517. Course conducted in Spanish. Mr. Rogers.

An intensive study of *Vazarillo de Tormes*, *Guzmán de Alfarache*, *El Buscón*, and *El diablo conjuelo*. Lectures, collateral reading, discussion, and reports.

***614. Cervantes.** Five credit hours. Autumn Quarter. Four meetings each week, a fifth at the option of the instructor. Given in alternate years. Prerequisite, Spanish 417 or 517.

An intensive study of *Don Quixote*. Lectures and discussion. Collateral reading and reports on Cervantes' other works, especially the *Novelas ejemplares*.

615. Survey of Spanish Literature of the Twelfth to Sixteenth Centuries.

* Not given in 1956-1957.

Five credit hours. Autumn Quarter. Four meetings each week, a fifth at the option of the instructor. Given in alternate years. Prerequisite, Spanish 417 or 517. Mr. Wardropper.

Lectures, collateral reading, discussion, and reports.

*616. Survey of Spanish Literature of the Seventeenth and Eighteenth Centuries. Five credit hours. Spring Quarter. Four meetings each week, a fifth at the option of the instructor. Given in alternate years. Prerequisite, Spanish 417 or 517.

Lectures, collateral reading, discussion, and reports.

617. Modern Spanish Syntax. Five credit hours. Autumn Quarter. Required for Education 536. Prerequisite, Spanish 520 and/or permission of the instructor.

A course designed for advanced students who expect to teach Spanish. Appreciation of details, illustrated with composition and with analysis of contemporary texts. Discussion and reports on text books, on articles in periodicals, and particularly on Kany's *American Spanish Syntax*.

*618. Survey of Spanish Literature of the Sixteenth Century. Five credit hours. Spring Quarter. Four meetings each week, a fifth at the option of the instructor. Prerequisite, Spanish 417 or 517.

Lectures, collateral reading, discussion, and reports.

620. Spanish Pronunciation and Diction. Five credit hours. Winter Quarter. Required for Education 536. Prerequisite, Spanish 417 or 517. This class is limited to twelve. Mr. Sapon.

Introduction to Spanish phonology. A systematic analysis will be made of the speech sounds of Peninsular and American Spanish, and problems of stress and intonation peculiar to Spanish will be considered. Individual problems of pronunciation and those involved in teaching will be considered.

623. Spanish Translating. Three credit hours. Spring Quarter. Prerequisite, Spanish 520. Mr. Rozzell.

This course gives training in translation from English to Spanish and from Spanish to English. This course is helpful in preparing for teaching or for military, diplomatic or other special service where exact linguistic knowledge is needed.

*631. Romanticism in the Hispanic World. Five credit hours. Winter Quarter. Four meetings each week, a fifth at the option of the instructor. Elective. Given biennially alternating with Spanish 607. Prerequisite, Spanish 417 or 517.

A study of dramatists, poets, novelists and essayists designed to bring out the literary unity of the Hispanic world in the Romantic period. Larra, Espronceda, Sarmiento, Heredia, Zorrilla, Bécquer, Isaacs, and others.

639. The Contemporary Spanish American Novel. Five credit hours. Spring Quarter. Four meetings each week, a fifth at the option of the instructor. Prerequisite, Spanish 417 or 517. Mr. Armitage.

Recent development of the novel in the various regions of Spanish America. The *gaucho* novel, the *indianista* movement, and the influence of Naturalism. The novel of the Mexican Revolution. Gúraldes, Gálvez, Barrios, Alegria, Icaza, Rivera, Gallegos, Azuela, and others.

*640. Twentieth Century Spanish Literature. Three credit hours. Winter Quarter. Prerequisite, Spanish 417 or 517.

The essayists and thinkers of the Generation of '98, including Unamuno, Azorin, Ortega y Gasset, and others. Lectures, collateral reading, and reports.

*641. Contemporary Hispanic Poetry. Five credit hours. Spring Quarter. Prerequisite, Spanish 417 or 517.

Currents of Spanish and Spanish American poetry from Rubén Darío to García Lorca and Neruda.

*645. Spanish Literature. Three to five credit hours. Spring Quarter.

* Not given in 1956-1957.

Five meetings each week. Students may secure credit under this course number not to exceed fifteen hours. Prerequisite, Spanish 417 or 517 and junior standing. Senior staff.

Under this course number, senior members of the department will conduct advanced studies of significant topics that are covered only briefly if at all in other offerings of the department.

647. Romance Linguistics. Three to five credit hours. Spring Quarter. Five meetings each week. Students may secure credit under this not to exceed fifteen hours. Elective. Prerequisite, French or Spanish 517 and/or 520, or its equivalent in a major Romance Language, and junior standing.

Under this course number the senior staff will conduct studies of linguistic problems not otherwise provided for and also minor Romance Language and dialect studies.

Topic: History of the Spanish Language. Mr. Sapon.

701. Minor Problems in Spanish. One to five credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, permission of the instructor. Professors, Associate and Assistant Professors.

705-706-707. Honors Courses in Spanish. Three to ten credit hours. Autumn, Winter, and Spring Quarters. Work in conference, library, or phonetics laboratory. Prerequisite, senior standing, with a record of "A" in at least half of the Spanish courses and an average of "B" in the remainder, and the approval of the department. Professors, Associate and Assistant Professors.

This course is intended to give undergraduates of special aptitude a greater opportunity to do independent study than is possible in the ordinary course.

Not open for graduate credit.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 692.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

RURAL ECONOMICS AND RURAL SOCIOLOGY

(See Agricultural Economics and Rural Sociology)

RUSSIAN

Office, 319 Derby Hall

EXECUTIVE COMMITTEE, DEAN FULLINGTON, ASSISTANT PROFESSOR EPP

412. Elementary Russian. Five credit hours. Autumn Quarter. Five recitations each week. Mrs. Epp, Mr. Pahl.

The elements of Russian grammar, reading of easy prose and poetry; oral and written practice.

413. Elementary Russian. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Russian 412. Mrs. Epp, Mr. Pahl.

The elements of Russian grammar, reading of easy prose and poetry; oral and written practice.

414. Elementary Russian. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Russian 413. Mrs. Epp, Mr. Pahl.

Reading of prose and poetry; oral and written practice; grammar review.

†415. Intensive Russian. Fifteen credit hours. Fifteen recitations each week. Mrs. Epp.

This is a course in elementary and intermediate Russian in which for one Quarter the

† Not given during the academic year, 1956-1957.

student will devote his entire time to the mastery of Russian. The elements of Russian grammar will be given with abundant oral and written exercises, together with readings from Russian literature.

The course is especially planned for students who expect to enter military or governmental service. The number of students will be limited to fifteen. Permission of the instructor is required.

416. Elementary Scientific Russian. Two credit hours. Spring Quarter. Prerequisite, Russian 413. Mrs. Epp.

535. Advanced Russian. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, Russian 414 or 415. Mrs. Epp.

Readings from Pushkin and the libretto of the opera "Prince Igor" supplemented by suitable readings from Russian history and geography.

536. Advanced Russian. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Russian 414 or 415. Mrs. Epp.

Readings from Gogol, Chekhov, and the libretto of the opera "Sadko" supplemented by suitable readings from Russian history and geography.

537. Advanced Russian. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Russian 414 or 415. Mrs. Epp.

Readings from Tolstoi, Maxim Gorki, and the libretto of the opera "Boris Godunov" supplemented by suitable readings from Russian history and geography.

538. Advanced Scientific Russian I. Two credit hours. Winter Quarter. Prerequisite, Russian 414 or 415, or 416. Mrs. Epp.

539. Advanced Scientific Russian II. Two credit hours. Spring Quarter. Prerequisite, Russian 538. Mrs. Epp.

695. Private Reading. Two to five credit hours. Autumn, Winter, and Spring Quarters. Open only on permission of the Department. This course may be repeated for credit to a maximum of ten hours. Mrs. Epp.

Not open for graduate credit.

SCHOOL ADMINISTRATION

(See Education)

SHOPWORK

(See Industrial Engineering)

SOCIAL ADMINISTRATION

Office, 303 Stillman Hall

PROFESSORS SHIMP, RECKLESS, BATCHELOR, YOUNG, AND LEEDY, ASSOCIATE PROFESSORS BLACKBURN, HAMILTON, LIVINGSTON, CORNELL, AND SMITH, ASSISTANT PROFESSORS BAKER, NICHOLS, ORBISON, LAKIN, SISSON, HOFFMAN, AND EVANS

NOTE: Students who have credit for Social Administration 518, 635, 638, 639, 646, 668, or 695 should consult the School of Social Administration before registering in any course in Social Administration.

510. Introduction to Rehabilitation. Three credit hours. One Quarter. Autumn and Spring. Mr. Lakin.

The field of rehabilitation, its definitions and functions, furnishing a background of understanding of the problems of the handicapped.

599. Health and Welfare Needs and Resources. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Sociology 402, 407, 410, 507, or the equivalent. Mr. Lakin, Mrs. Sisson.

A survey of contemporary social work by functional groupings of services such as case-work, group work, community organization, research. Historical development.

Not open to students who have credit for Social Administration 518 or 618.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

600-601. Health and Welfare Needs and Resources. Three credit hours each. 600, Autumn and Winter Quarters; 601, Autumn and Spring Quarters. Prerequisite, to 600, Social Administration 599 or the equivalent; prerequisite to 601, Social Administration 600 or the equivalent. Mrs. Sisson, Mr. Blackburn.

An analysis of needs in relation to established services; the functional relationship of facilities and programs in the health and welfare field. Social work as a profession. The citizen and social welfare.

Not open for graduate credit.

Not open to students who have credit for Social Administration 668.

603. Social Work—Its Structure and Function. Three credit hours. Autumn Quarter. Mr. Leedy, Mr. Livingston.

The social bases of social work. The scope of its activities. Its organization on national, state, and local lines. Its impingement upon business and the professions.

Not open to majors in Social Administration. Not open for graduate credit.

637. Social Implications in Rehabilitation. Three credit hours. One Quarter. Autumn and Winter. Mr. Hamilton, Mr. Lakin.

The significance of disability and employability in their social, medical, and industrial applications; rehabilitation as a process; current concepts.

Not open for credit to students who have credit for Social Administration

510. Not open for graduate credit to students majoring in Rehabilitation.

647. Practice in Leading Group Recreation. Three credit hours. One Quarter. Autumn and Winter. Lectures, readings, practical demonstrations, field trips. Prerequisite, Sociology 402, 407, 410, or 507, or the equivalent. Sociology 645 is strongly recommended as a preceding or concurrent course. Mr. Batchelor, Mr. Baker.

Practice and demonstration in the leadership of recreational activities. The use of games, music, folk and square dancing, dramatics, and other program resources to achieve specific objectives.

661. The Individual and the Social Agency. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Sociology 402, 407, 410 or 507 or the equivalent. Mrs. Orbison, Mrs. Sisson.

The study and evaluation of social and environmental and psychological conditions as they affect the individual in his use of social welfare resources.

Not open to graduate students in Social Administration.

Not open to students who have credit for Social Administration 695.

670-671. Community Health Organization. Two credit hours each. Spring Quarter. Prerequisite, Sociology 402, 407, 410, or 507, or the equivalent. Mr. Leedy.

The aims and historical developments of public health, with particular reference to England and the United States of America.

SOCIOLOGY AND ANTHROPOLOGY

Office, 112 Hagerty Hall

PROFESSORS SLETT, BATCHELOR, BERRY, CUBER, MANGUS, OYLER, AND RECKLESS, ASSOCIATE PROFESSORS BENNETT, BULLOCK, JONASSEN, ROBBINS, SEEMAN, AND WOLFF, ASSISTANT PROFESSORS ESTEL, NISSEN, ISHINO, AND SCHNUR, MRS. BOURGUIGNON, MR. CLARKE, MR. DINITZ, MR. DYNES, MR. JAMES, MR. WEBB, AND ASSISTANTS

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SOCIOLOGY

401. Introductory Sociology. Five credit hours. One Quarter. Autumn, Winter, Spring. Mr. Cuber and Staff.

A study of the fundamental concepts of sociology and an introduction to the analysis of social problems.

Not open to students who have credit for Sociology 410, 507, or 511.

402. Social Trends and Problems. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. All instructors.

Analysis of recent social trends and contemporary social problems.

Not open to students who have credit for Sociology 410 or 511.

407. Educational Sociology. Five credit hours. One Quarter. Autumn, Winter, Spring. Field trips, visits to local institutions, projects. Prerequisite, five credit hours in Sociology. Mr. Webb.

Sociological background of school children, current social trends as they affect education and resultant social functions of the schools.

505. The Sociology of Urban Life. Five credit hours. One Quarter. Winter and Spring. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Jonassen.

The place of the city in social organization. The emergence of urbanism. Racial, cultural, and economic groupings. Physical, intellectual, and aesthetic well-being of the urban population and the agencies identified with their problems.

506. American Minority Groups. Three credit hours. Winter Quarter. Not open to juniors and seniors. Prerequisite, five hours of sociology. Mr. Berry.

A study of the cultural background, distribution, assimilation, and other adjustments of selected minority groups.

Not open to students who have credit for Sociology 605.

510. The Standard of Living. Four credit hours. Spring Quarter. Four class meetings each week. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor, or Economics 402. Mr. Nissen.

A consideration of the content of the various standards of living in American society, their economic and social significance. Problems in family budgets and retail buying.

511. Principles and Problems of Sociology. Three credit hours. Autumn Quarter. Mr. Bullock.

A study of fundamental concepts of sociology. The nature of society; groups; populations; institutions and social changes. Attention will be given to current major social problems throughout the course.

Not open to students who have credit for Sociology 401-402, 410 or 507.

518. Social Implications of Low Income. Three credit hours. Winter Quarter. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Nissen.

The incidence of low income people as to location, occupation, and income ranges. The relationship of low income to the health of these people and to their participation in community life. A review of the programs and theories which have been advanced to deal with these conditions.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

600. The Modern Family. Four credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Oyler, Mr. Mangus, Mr. Nissen.

An examination of the results of the impact of modern culture upon the family with special reference to such factors as size of family, member relationships, economic problems, divorce, desertion, status of women.

601. Types of Family Organization. Four credit hours. Winter Quarter. Prerequisite, Sociology 600. Mr. Oyler.

A survey of family organization from primitive times to the present; an analysis of the factors that entered into their development.

602. Marriage Education Programs in the United States. Three credit hours. Spring Quarter. Prerequisite, Sociology 600. Mr. Oyler.

A critical examination of programs designed for the preparation for family life in the United States.

604. Race Problems. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Berry.

A survey of the problems arising from the contacts of peoples who differ as to race and culture.

614. The Community. Four credit hours. Autumn Quarter. Four class meetings each week. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Jonassen.

Development of the modern community. Approaches to the study of communities. Significance of processes and value systems for community organization and disorganization.

Not open to students who have credit for Sociology 514.

622. Social Factors in Personal Adjustment. Three credit hours. Autumn Quarter. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor.

Nature of human nature; process of socialization; social change and individual demoralization; social roles in conflict situations; re-direction of social activity.

623. Collective Social Behavior. Three credit hours. One Quarter. Winter and Spring. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor.

A study of the kinds of mass action arising in crowds, mobs, strikes, audiences, and the public. Problems and techniques of study and control.

624. Culture Patterns and Personality. Three credit hours. Spring Quarter. Three lecture periods each week. Prerequisite, Sociology 623, or Psychology 521, or the equivalent. Mrs. Bourguignon.

The distinctive anthropological contributions to the general field of social psychology. Variations in personality as associated with variations in culture. The range of personality differences within various cultures.

625. Criminology. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Dinitz, Mr. Schnur.

The nature, variation and causes of crime and delinquency. Studies of criminal liability, criminal careers, and organized crime and racketeering.

626. Penology. Four credit hours. One Quarter. Autumn and Winter. Prerequisite, Sociology 625. Mr. Reckless.

The handling and treatment of adult offenders by courts, jails, reformatories, prisons, probation, and parole.

Not open to students who have credit for Social Administration 626.

629. General Sociology. Four credit hours. Autumn Quarter. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Cuber.

A critical examination of the more fundamental ideas and concepts of modern scientific sociology.

643. Analysis of Small Groups. Four credit hours. Spring Quarter. Prerequisite, ten hours of sociology and ten hours of psychology or the equivalent with the permission of the instructor. Mr. Seeman.

Effect of size on group processes. Analysis of social interaction, communication patterns, and functional roles within small groups. Observational techniques.

645. Leisure and Recreation. Four credit hours. One Quarter. Autumn and Spring. Prerequisite, five hours of sociology, or its equivalent. Mr. Batchelor, Mrs. Robbins.

The sources of leisure in early and modern society. The social significance and uses of leisure. The social functions of play. Historical aspects of play. The recreation problems of modern communities from the standpoint of control and of public provision.

648. Religious Institutions in Modern Society. Three credit hours. Spring Quarter. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Berry.

The social role of religious institutions and beliefs, with particular reference to the United States; the relation between religion and other aspects of society.

661. Social Causation. Three credit hours. Autumn Quarter. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Wolff.

A theory of social causation and analyses of selected cases of social change. Text, class reports, projects.

662. Social Change. Three credit hours. Winter Quarter. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Wolff.

A theory of social change and analyses of selected cases of social control. Text, class reports, projects.

663. Social Control. Three credit hours. Spring Quarter. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Wolff.

A theory of social control and analyses of selected cases of social control. Text, class reports, projects.

676. Social Classes. Four credit hours. Autumn Quarter. Four class meetings each week. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Cuber.

Class distinctions as a phase of social differentiation. The origin and characteristics of social classes. The significance for modern society of class consciousness, class struggle, and social mobility.

677. Social Organization in a Changing World. Four credit hours. Winter Quarter. Four class meetings each week. Prerequisite, five hours of sociology, or its equivalent with the permission of the instructor. Mr. Cuber.

An examination of the adaptability of present institutional organization to the situation created by world reorganization. The impact of world problems upon American culture. Implications of democracy for social reconstruction.

678. The School and the Community. Three credit hours. Winter Quarter. Prerequisite, five hours of sociology or its equivalent with the permission of the instructor.

A study of the school as a social institution in the American community. The sociological importance of community structures, processes and problems in determining school-community relationships.

680. Social Orientation of Children. Four credit hours. Winter Quarter. Three class sessions each week and one hour for field study of a child group. Prerequisite, Sociology 402 or 407 or permission of instructor. Mrs. Robbins.

A study of the ways in which society socializes children, with parallels from more stable and less complex cultures. Current breakdowns in the socializing process and implications for the school and other educational agencies.

700. Special Problems. One to four credit hours. All Quarters. Prerequisite, ten hours of sociology, senior standing, and with permission of the instructor. Assigned readings or individual research, informal conferences and written reports. Registration for this course number should be followed by a letter indicating the field of sociological study.

- (a) Sociological Theory
- (b) Social Organization and Planning
- (c) Anthropology
- (d) Criminology and Penology
- (e) Educational Sociology
- (f) Race Relations
- (g) Social Psychology
- (h) The Family
- (i) Research Methodology
- (j) Urban Sociology
- (k) Unclassified

705. Introduction to Sociological Research. Four credit hours. Autumn Quarter. Prerequisite, Sociology 402, 407, 410, or 507 and a course in elementary statistics and senior standing. Mr. Bullock.

Delineation of a research problem in sociology. Uses of available sources of data. Sampling procedures of sociological research. Field methods for collecting original data. Sociometric instruments.

Not open to students who have credit for Sociology 800.

725. Control and Prevention of Crime and Delinquency. Four credit hours. Autumn Quarter. Two two-hour lecture periods each week. Elective. Prerequisite, Sociology 625. Mr. Reckless.

Analysis of the operational effectiveness of special measures and programs pointed toward the control and prevention of crime and delinquency.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this area see the Bulletin of the Graduate School.

ANTHROPOLOGY

501. Introduction to Anthropology. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, sophomore standing. Anthropology staff.

An introductory survey of the field of anthropology, with special emphasis upon ethnology and cultural anthropology. Human evolution; "racial" differences and their significance; theories of cultural patterning, function, and growth; the prehistoric development of culture; the social behavior of man as illustrated by the simpler societies.

502. Introduction to Physical Anthropology. Five credit hours. One Quarter. Autumn and Winter. Prerequisite, sophomore standing or the equivalent. Anthropology staff.

An outline of the organic development of man; a review of the evidence for human evolution as found by the fossil apes and early human types; prehistoric archaeology and the development of culture; the modern ethnic groupings of man.

Not open to students who have credit for Sociology 400.

503. Introduction to Ethnology. Five credit hours. Spring Quarter. Five class meetings each week. Lectures, motion pictures. Anthropology staff.

A comparative survey of tribal peoples in basic world areas—Asia, Africa, Oceania, North and South America—from the pre-contact phase to colonialism. Three or four representative groups will be selected and studied intensively during the course.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Students may also register under Sociology 700 for special problem work in Anthropology.

607. Culture Contact and Technological Change. Four credit hours. Spring Quarter. Prerequisite, Sociology 401-501, or 410-501, or 501-507, or permission of the instructor. Mrs. Bourguignon.

Consequences for folk societies of the diffusion of Euro-American culture. The introduction of advanced technology to underdeveloped areas. Cultural aspects of colonialism and military government.

***612. Social Relations in Folk Societies.** Four credit hours. Autumn Quarter. Given in alternate years. Prerequisite, five hours of anthropology or its equivalent with the permission of the instructor. Mrs. Bourguignon.

The development of forms of social organization in simpler societies; the dynamics of social relations in such societies; a comparison of simpler forms of social structure with complex forms.

613. Religion in Folk Societies. Four credit hours. Autumn Quarter. Prerequisite, five hours of anthropology, or its equivalent with the permission of the instructor. Mrs. Bourguignon.

* Not given in 1956-1957.

World views of simpler peoples, emphasizing religion and sacred beliefs. Integration of these beliefs with social organization and the arts. Slides, motion pictures, recordings.

630. Indians of the Americas. Four credit hours. Spring Quarter. Prerequisite, five hours of anthropology or its equivalent with the permission of the instructor. May be taken in a two-course sequence with Anthropology 632.

A survey of American Indian cultures in their tribal state at the time of European conquest, with a briefer study of the Indian as a minority group in Modern America. Motion pictures and slides.

***632. American Indian Prehistory.** Four credit hours. Autumn Quarter. Prerequisite, five hours of anthropology or its equivalent with permission of the instructor. Mr. Estel, Mr. Baby.

A survey of American Indian archaeology. The origin and development of Indian cultures from the first peopling of the continent to the coming of Europeans. Slides, museum study.

633. Dynamics of American Culture. Three credit hours. Autumn Quarter. Prerequisite, five hours of anthropology or its equivalent with the permission of the instructor. Mr. Bennett.

A review of social scientific analysis of American customs, institutions, social systems and ideas, with emphasis on recent cultural anthropological studies.

634. Ethnology of Asia. Four credit hours. Winter Quarter. Four lecture periods each week. Prerequisite, five hours of anthropology or its equivalent with the permission of the instructor. Mr. Bennett.

A survey of the peoples of Asia—high civilizations and tribal cultures. Prehistoric origins of Asian cultures; the distribution of physical types; languages; social customs.

635. Ethnology of Africa. Four credit hours. Autumn Quarter. Four lecture periods each week. Prerequisite, five hours of anthropology or its equivalent with the permission of the instructor. Mrs. Bourguignon.

The peoples of Africa south of the Sahara. Distribution of physical types; languages; cultural areas. Special attention to West Coast kingdoms as sources of the American Negro.

637. Living Races of Man. Four credit hours. Spring Quarter. Prerequisite, Anthropology 502 or fifteen hours of biology including one course in genetics. Mr. Estel.

A generalized approach to the racial classification of man on a biological basis. The formation of races, racial ancestry, and the distribution of human physical types. Biological race differences and race mixture.

639. Theory and Problems of Cultural Anthropology. Four credit hours. Winter Quarter. Prerequisite, twenty hours in allied subjects. Mr. Bennett.

Major theoretical viewpoints in cultural anthropology. Significance of the cultural approach. Applied anthropology and the relation of cultured anthropology to psychology and other social sciences.

***710. Introduction to Anthropological Research.** Three credit hours. Autumn Quarter. Prerequisite, fifteen hours of Anthropology or ten hours of anthropology and ten hours of closely related work; and consent of the instructor. Mr. Bennett, Mrs. Bourguignon.

Nature and scope of research problem in anthropology. Survey of methods in field ethnology, cultural anthropology, archaeology, and physical anthropology.

SPANISH

(See Romance Languages and Literature)

SPECIAL EDUCATION

(See Bureau of Special and Adult Education)

SPEECH

Office, 205 Derby Hall

PROFESSORS YEAGER, WILEY, HARDING, SUMMERS, KNOWER, SANDERSON, MOSER, BLACK, McDOWELL, UTTERBACK, AND DIETRICH, ASSOCIATE PROFESSORS EMSLEY, SCHRECK, McGAW, CARMACK, AND IRWIN, ASSISTANT PROFESSORS RILEY, EWING, O'NEILL, FOTHERINGHAM, MALL, HOAK, OYER, AND RICKEY, MR. ROSS, MR. BROOKS, MR. GOYER, AND ASSISTANTS

Instruction in the Speech and Hearing Clinic

Through Speech 405, 410, instruction is provided in all Quarters for students with voice, speech or hearing disabilities. Students desiring advice concerning this instruction should consult with the Director of The Speech and Hearing Clinic, Room 300, Derby Hall, Telephone Extension 381.

Extra-Curricular Instructional Program

The Department of Speech offers a varied program of extra-curricular activities in debate, discussion, and theatre. It is possible to participate in these programs without taking courses in the Department. Interested students should make inquiries of the Director of the several activities in the Office of the Department of Speech, Derby Hall 205. For information regarding academic credit for forensic and theatre activities see Speech A and Speech B at the end of the list of "500" level courses.

Speech Courses in other Departments

For Psychology 632 (Psychology of Speech), Psychology 633 (Psychology of the Audience), and Psychology 704 (Tests and Measurements in Speech Education), see the offerings of the Department of Psychology; for Education 600 (U), (Minor Problems in Speech Education), and Education 675 (The Teaching of Speech in the Secondary School), see the offerings of the Department of Education. The offerings of both of these departments are found in the Bulletin of the College of Education. For Education 800 (U), (Seminar in Speech Education), see the offerings of the Department of Education in the Bulletin of the Graduate School. For Physics 645 (Acoustics for Students of Music and Speech), see the offerings of the Department of Physics and Astronomy in the Bulletin of the College of Arts and Sciences.

401. Principles and Practice of Effective Speaking I. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Open to Freshmen. Mr. Knower and staff.

The principles of speech composition and delivery. Practice in preparing and presenting short informative, entertaining, and persuasive speeches. Audience analysis and control. Emphasis is placed upon speaking as a thinking process. The methods in which the student is trained are applicable to social and business conversation as well as to public address.

402. Principles and Practice of Effective Speaking II. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Speech 401. Open to Freshmen. Mr. Utterback and staff.

Continuation of Speech 401. Group discussion and conference speaking. Cooperative conversation directed toward the forming of decisions by committees, small groups, and limited assemblies. Special attention to the speaking problems which arise in business and professional relationships. The class is divided into small groups for practice under the supervision of the instructor.

405. Speech for International Students. No credit hours or three credit hours for undergraduates who make satisfactory progress in the course.† Five meetings a week. One Quarter. Autumn and Winter. Open to Freshmen. This course may be repeated. Mr. Black, Mr. Moser, Mr. O'Neill.

A course in speech improvement for students whose native language is not English. Intensive ear training to identify differences in sounds, stress, and intonation patterns and practice to acquire the correct articulation, pronunciation, and rhythm of American speech. Conversation, discussion, and reading to enlarge the speaking vocabulary and to acquaint the student with common idioms. Concurrent registration in English 406 required.

410. Personal Speech Rehabilitation. No credit hours or three credit hours.† One Quarter. Autumn, Winter, Spring. Open to Freshmen. This course may be repeated. Mr. Moser, Mrs. Irwin and staff.

Enrollment in this course is largely made upon the basis of individual recommendation by one of the counseling agencies in the various colleges. Students with defective speech or hearing may be recommended for the course. Students enrolled are divided into sections according to their needs. Individual clinical attention is given when needed.

† Credit shall not count toward graduation.

Sections for the following types of personal speech and hearing rehabilitation are scheduled each Quarter:

- (a) Articulation and voice
- (b) Stuttering
- (c) Impaired hearing
- (d) All types (Twilight School only)

Students enrolling for articulation and voice should register in 410 (a), for stuttering in 410 (b), and for impaired hearing in 410 (c). Students registering for stuttering in 410 (b) should consult the instructor prior to enrolling. If their schedules will not permit registration at the appropriate hours in 410 (a), (b), or (c), they should register in 410 (d). Consult time schedule. (International students see Speech 405.)

416. Introduction to Speech. Two credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Lectures, discussions, demonstrations, and readings. Mr. Yeager and staff.

The role of oral communication in personal development, cultural life, and the democratic process and its significance in human relations. Designed to explain the functions of and the skills used in communication by means of oral presentation.

417. Voice and Diction. Two credit hours. One Quarter. Autumn, Winter, Spring. Four class hours each week. Open to Freshmen. This course may be repeated. Students with clinically defective speech may enroll in the course only with previous and/or concurrent registration in Speech 405 or 410. Mr. Black, Mrs. Irwin, Mr. Oyer.

Introductory study of the principles and practices necessary for the development of a satisfactory speaking voice. Designed for the student concerned about his speech adequacy. Emphasis is placed on:

- (1) Objective attitude toward speech,
- (2) Voice and personality,
- (3) Intelligibility of speech,
- (4) Pronunciation.

430. Introduction to Theatre. Three credit hours. One Quarter. Autumn, Winter, Spring. Mr. Dietrich.

Primarily for first year students who desire a better appreciation of the theatre as a recreational, cultural, and social force in modern living. Lectures with slides, movies, and demonstrations will present a consideration of theatrical forms and conventions which contribute to a better understanding of the modern theatre.

This course may be taken in partial fulfillment of the Humanities Requirement.

470. Argumentation and Debate. Five credit hours. One Quarter. Autumn and Winter. Prerequisite, Speech 401. Mr. Carmack.

Analysis of arguments which arise in conversation, in discussion groups, and in public debate. Finding evidence. Constructing the brief. Argumentative composition and delivery. Refutation. Development of capacity to reply extemporaneously to objections. Frequent practice in analysis, evidence, brief-making, and in presenting oral arguments.

501. Principles of Effective Speaking. Three credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Open only to Juniors and Seniors. Mr. Knower and staff.

Practice in preparing and presenting short informative and persuasive speech on technical material. The principles of speech composition. Audience analysis and control. Delivery and oral language.

Not open to students who have credit for Speech 401.

504. Speech Functions and Responsibilities of the Teacher. Three credit hours. One Quarter. Autumn, Winter, Spring. Discussions, lectures, reading practice, observations. Prerequisite, five Quarters of university work. Miss Sanderson.

Emphasis will be placed upon a study of (1) the development of language skills in children from infancy through adolescence; (2) speech needs commonly found in the classroom; and (3) the teacher's voice as a factor in the educative process.

505. Oral Interpretation. Five credit hours. One Quarter. Autumn and Winter. Mr. Wiley.

Reading of poetry and prose with special consideration of variety, range, appreciation, and expression. The general purpose of this course is to give the student further help in developing a deeper intellectual and emotional appreciation of literary values which may be expressed in oral reading. Laboratory facilities are available to students in this course.

506. Persuasion. Three credit hours. One Quarter. Winter and Spring. Three recitations each week. Prerequisite, Speech 401 and 402 or 401 and 470. Mr. Fotheringham, Mr. Ross.

Influencing individuals and audiences by means of spoken appeals. Analysis of the forces which lead to belief and action. Studies in the nature of the response of different types of audiences. Methods of dealing with different mental states. Practice in devising and presenting oral appeals to meet difficult speaking situations.

508. The Speech Situation. Two credit hours. Spring Quarter. No prerequisite. Readings, discussions, observation and reports. Mr. Fotheringham.

A study of personal and social factors influencing the effectiveness of speech, including the responses of listeners to speakers as persons and the responses of speakers to listeners. The course deals with oral communication as a social process in terms of speaker-listener relationships.

509. Personal Speech Effectiveness. Two credit hours. One Quarter. Autumn and Winter. Mr. Riley.

A course aimed at the improvement of speech habits and the development of increased speech effectiveness for students preparing for work in professions where better-than-ordinary speech abilities are required. Practice in the oral presentation of prose materials, with emphasis on reading effectiveness, phrasing, emphasis, enunciation and pronunciation.

Not open to students with credit in Speech 517.

511. Parliamentary Law. Two credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Mr. Carmack.

Study of the rules of procedure by which self-governing organizations transact business, and intensive practice in their use.

521. Acting I. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class hours and three laboratory hours each week. Mr. McGaw and staff.

Study and practice in the fundamentals of acting techniques for stage, radio, and television. The importance of voice and movement in theatrical expressiveness. The achievement of stage presence.

522. Acting II. Three credit hours. One Quarter. Winter and Spring. Prerequisite, Speech 521. Three class hours and three laboratory hours each week. Mr. Schreck, Mr. McGaw, and staff.

Studies and exercises in the imaginative creation of character for the stage, radio, and television. The physical, mental, and emotional processes involved in analyzing character as perceived by the dramatist and developed in effective presentation.

525. Stage Make-up. One credit hour. Autumn Quarter. One two-hour laboratory period each week.

A practical course in the fundamentals of stage make-up for straight and character roles.

541. Elementary Stagecraft. Three credit hours. Autumn Quarter. Three class hours and three laboratory hours each week. Mr. Hoak.

Elementary training in the basic aspects of stagecraft for the theatre and television. General principles and practice in planning, constructing, painting, and mounting stage sets.

545. Play Production. Three credit hours. One Quarter. Autumn and Spring. Mr. Dietrich and senior staff.

Principles and techniques of presenting a play on the stage. Lectures, discussions, and demonstrations dealing with play selection, play analysis, principles of direction and action, stage scenery, lighting, sound effects, and costuming.

560. Radio Speech. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, sophomore standing. Mr. Riley and staff.

Fundamentals of microphone technique, with practice in speaking, acting and announcing for radio and television. Basic training in the planning and writing of radio and television talks. Voice recording for critical analysis.

565. Radio Program Production. Three credit hours. One Quarter. Winter and Spring. Mr. Riley.

Training in basic techniques of producing and directing radio programs, with special attention to dramatic programs. Practical experience in directing programs under studio conditions.

566. Radio Laboratory Practice. One credit hour each Quarter. Autumn, Winter, Spring. Prerequisite, Speech 560 or 565. Mr. Mall.

Practical experience in broadcasting over local radio stations, or laboratory work in specialized program fields under studio conditions.

571-572. Radio and Television Program Departments. One credit each Quarter. Winter and Spring Quarters. Two class meetings each week. Prerequisite, Speech 560 or 656. Mr. Mail.

Problems relating to the functions and operation of program departments of radio and television stations. 571 deals with program department functions in general, and with program scheduling, traffic, and music library organization; 572 with continuity department operations and problems of building program audiences.

580. Bases of Speech Production. Three credit hours. One Quarter. Autumn and Spring. No prerequisites. Physics 411 and Zoology 401 are desirable background courses. Mr. Oyer.

An introduction to the scientific bases of speech. An orientation to the psychological, neurological, physiological, physical, genetic, phonetic, and sociological aspects of speech production.

585. Introduction to Phonetics. Three credit hours. Winter Quarter. Prerequisite, Speech 580 for speech majors; for others, no prerequisite. Mr. Emsley.

Mastery of the International Phonetic Alphabet as applied to American Speech with a comparative study of General American, Eastern American, Southern American and Received Standard British pronunciations. Analysis of the physiological position and movements involved in the production of English speech sounds with study of the coordination of these movements in correct speech.

590. Speech Development in Children. Three credit hours. Spring Quarter. No prerequisite. Mr. Oyer.

The developmental sequence of language growth from the first vocalization to the expression of abstract thought. Deviations from the normal patterns are noted.

ACADEMIC CREDIT FOR EXTRA-CURRICULAR ACTIVITIES

University Speech Activity groups are open to all students in the University. Students enroll and receive credit toward any undergraduate degree for a total of six Quarter credit hours in Speech A and B. To enroll in Speech Activities programs students should observe the following pre-registration before the close of registration for any Quarter; for tryouts for forensic activities see Mr. Carmack; for tryouts for theatre activities see Mr. Hoak.

Do not register for these courses without written permission of the instructor. Students accepted for the Forensic Activity group will register for Speech A; those accepted for the Theatre Activity group will register for Speech B.

Speech A. Forensic Activities. One credit hour. One Quarter. Autumn, Winter, Spring. A minimum of three or more hours of group participation each week. Mr. Carmack.

Speech B. Theatre Arts. One credit hour. One Quarter. Autumn, Winter, Spring. A minimum of three or more hours of theatre work each week. Mr. Hoak.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

University requirements for any of the courses in this group specify a prerequisite of junior standing and either (a) 30 Quarter hours in not more than two allied subjects, or (b) 10 hours in such allied subjects, plus 10 hours in Speech. Five hours each from the 401-402 and the 410-417 sequences are advisable.

601. The Forms of Public Address. Five credit hours. Autumn Quarter. Prerequisite, ten hours of speech. Mr. Carmack.

A study of special methods by which speech is made clear, interesting, and forceful. Practice in using these methods in the preparation and delivery of the different forms of public address, including nominating, dedicatory, eulogistic, after-dinner, and general academic, political, and business speeches. A broad view of language training is given with the object of increasing the student's command of thought in writing and talking as well as in public speaking.

603. Group Thinking and Conference Leadership. Five credit hours. Winter Quarter. Prerequisite, junior standing or above and ten hours of speech or equivalent. Mr. Utterback.

The procedures used in exchanging information, solving problems, determining policies, and resolving differences in committees and other small groups. The methods of leading discussions and conferences.

610. Advanced Argumentation and Debate. Five credit hours. Spring Quarter. Two practice periods and special meetings each week. Prerequisite, Speech 470. Mr. Carmack.

Study of advanced principles of argumentation used in deliberative and forensic debating. Critical analysis and evaluation of debating as a means of democratic action. Study of the logical and ethical appeals and standards used in debate.

Not offered in 1957-1958.

617. Problems of American Phonetics. Three credit hours. Spring Quarter. Prerequisite, twenty hours in the Department of Speech, including Speech 585. Mr. Emsley.

The chief problems treated are: phonetic alphabets and dictionaries, research in dialect and phonemic analysis.

Not offered in 1957-1958.

620. Ancient Rhetorical Theory. Three credit hours. Autumn Quarter. Prerequisite, Speech 601. Mr. Wiley.

A study of the rhetorical theories of Plato, Aristotle, Cicero, Quintilian and other important classical writers.

Not offered in 1957-1958.

***621. English Rhetorical Theory.** Three credit hours. Winter Quarter. Prerequisite, Speech 620. Mr. Harding.

A study of the theories of leading British rhetorical writers from Thomas Wilson to Archbishop Whately.

To be offered in 1957-1958.

623. British Speakers and Speech Making. Three credit hours. Spring Quarter. Prerequisite, Speech 621. Mr. Harding.

Study and comparison of the careers of representative British orators from the Renaissance to the present. Analysis and criticism of their leading speeches and debates.

Not offered in 1957-1958.

***624. American Speakers and Speech Making.** Three credit hours. Spring Quarter. Prerequisite, Speech 621. Mr. Harding.

Study and comparison of the careers of representative American orators from Colonial times to the present. Analysis and criticism of their leading speeches and debates.

To be offered in 1957-1958.

626. Advanced Acting. Three credit hours. Autumn Quarter. Prerequisite, Speech 521 and 522 or the equivalent and permission of the instructor. Mr. McGaw, Mr. Schreck.

Advanced work in the principles of acting, its techniques and stage practices, with emphasis upon the historical development for application to period productions and adaptation to modern stylistic treatment. Research into the history of acting theory and acting practice in important periods in the theatre. Individual and group laboratory assignments of acting roles from representative plays.

627. Advanced Stagecraft and Design. Five credit hours. Winter Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisite, Speech 541, 633. Fine Arts 421 is recommended. Mr. Hoak.

Advanced training in specialized aspects of stagecraft and design. Styles in design and methods of building stage sets are considered in connection with production. Painting techniques are studied with relation to surfaces and effects. Special types of scenery are designed, built, and rigged. Training is given in shop management and budget planning.

Not offered in 1957-1958.

629. Stage Lighting. Three credit hours. Spring Quarter. One hour lecture and two two-hour laboratory periods each week. Prerequisite, Speech 541 or Speech 627. Mr. Hoak.

* Not given in 1956-1957.

Principles and practices in stage lighting. Technical instruction is given in the elements of electricity, the care and function of instruments, types and styles of lighting, composition, color and special effects.

Not offered in 1957-1958.

631-632-633. History of the Theatre. Three credit hours each Quarter. Autumn, Winter, Spring. Prerequisite, English 550 or 555; English 670 is recommended. Mr. McDowell.

A general survey of the rise and development of the theatre: the Classical, Medieval, Renaissance, Commedia dell'arte, later English and Continental, and Modern Theatre. Particular reference will be given to the origin of theatrical forms, and to staging in relation to the forms along with the reading of selected plays, reports, and round-table discussions. Illustrations of stage and scenery will accompany each lecture.

These courses may be taken in partial fulfillment of the Humanities Requirement.

***641. History of Stage Costumes.** Five credit hours. Spring Quarter. Prerequisite, Speech 545 or equivalent; prerequisite or concurrent, Speech 631. Fine Arts 501, 502, 503 recommended. Mr. McGaw.

An intensive and detailed study of historical, national, and traditional costumes from the early Egyptian period through the 19th Century. Lectures, slides, and demonstrations.

To be offered in 1957-1958.

646. Stage Direction. Five credit hours. Winter Quarter. Prerequisite, Speech 545 or equivalent. Mr. Dietrich and senior staff.

An intensive study and practice of the methods and techniques of the director. Principles and practice in composition, picturization, movement, pantomimic detail, rhythm. An analysis of types and styles of scripts from the viewpoint of the director. Each student will direct a one-act play.

***651. Modern Theatre Styles.** Three credit hours. Autumn Quarter. Prerequisite, Speech 646; prerequisite or concurrent, Speech 633; English 670 is recommended. Mr. McGaw, Mr. Schreck.

A study of the realistic and non-realistic styles in modern theatrical production. Detailed consideration of naturalism, realism, symbolism, expressionism, and theatricalism. The validity of these approaches in relation to the aesthetics of the theatre.

To be offered in 1957-1958.

652. Broadcast Programs and Audiences. Three credit hours. One Quarter. Autumn, Winter, Spring. Mr. Summers.

Broadcasting as a social force and as an agency of mass communications. Program types, basic program structure, elements of program effectiveness. Audience characteristics and listener preferences in relation to programs.

654. Radio Writing. Three credit hours. One Quarter. Autumn and Spring. Prerequisite, Speech 652, English 505 or equivalent in the School of Journalism. Mr. Mall.

Practice in the planning and writing of continuities of types of radio programs used on local stations, including musical, variety, and special events programs.

662. Radio and Television Drama. Three credit hours. One Quarter. Winter and Spring. Prerequisite, Speech 652, English 505 or equivalent in the School of Journalism. Mr. Riley.

History of drama in radio and television programming; uses of dramatic forms in propaganda, education and entertainment. Analysis of major dramatic program types and program elements including settings, characterization and plot structure. Extensive reading and study of radio and television dramatic scripts, and supervised practice in the writing of original scripts for broadcast.

666. Advanced Radio Production Directing. Three credit hours. Autumn Quarter. Prerequisite, Speech 565. Mr. Riley.

Advanced training in the production and directing of radio programs, with major attention to forms in general use on local radio stations. Experience in use of studio and control room equipment.

670. Radio and Television Program Planning. Two credit hours. One

* Not given in 1956-1957.

Quarter. Autumn and Winter. Prerequisite, at least ten hours credit in courses in radio in the Speech Department including Speech 652. Mr. Summers, Mr. Mall.

Preparation of station program schedules; planning and organization of various types of local programs within limitations of program budgets. Development of new programs through the planning stage, and consideration of changes in existing programs for increased listener interest.

672. Television Programs. Three credit hours. One Quarter. Autumn and Spring. Prerequisite, Speech 652. Mr. Summers, Mr. Mall.

Analysis of basic program forms used on television; requirements of effective program structure; consideration of the audience situation in relation to programs. Lectures and extensive observation.

***677. Anatomy, Physiology, and Pathology of the Ear and Vocal Mechanisms.** Five credit hours. Autumn Quarter. Mr. Alpert.

Lectures, readings, discussions, demonstrations, and laboratory dissections presenting the structure, functions, and diseases of the ear and vocal mechanisms and associated structures.

To be offered in 1957-1958.

678. Hearing and Speech. Three credit hours. Winter Quarter. Prerequisite, Physics 645 and Speech 682 or equivalent. Mr. O'Neill.

Basic concepts of psychophysics and psychophysiology of hearing with particular reference to the reception of speech.

682. Hearing Conservation and Pathology. Three credit hours. Autumn Quarter. Prerequisite, ten hours in speech or psychology. Mr. O'Neill.

Introduces the student to the area of hearing therapy. A consideration of hearing deficiencies and their effect on social, personal and school adjustment. Special attention to cooperation between therapist and physician in promoting hearing conservation. Information on prevalence, causes, types, and effects of hearing impairments.

683. Lip Reading. Three credit hours. Winter Quarter. Five recitations each week. Prerequisite, Speech 580, 585 and 682. Mr. O'Neill.

The visual-speech-reading problems of those with sufficient residual hearing to justify continuance in the public schools rather than reference to schools for the deaf. Foundation procedures and fundamental exercises. Practice with hard-of-hearing persons under direct supervision.

684. Lip Reading Clinic. Three credit hours. Spring Quarter. Five meetings each week. Prerequisite, Speech 683. Mr. O'Neill.

Clinical application of principles learned in Speech 683.

688. Audiometry: Principles and Practices. Three credit hours. Spring Quarter. Prerequisite, Speech 682. Five hours in class and a laboratory period each week. Mr. O'Neill.

Study of functional tests of hearing, including individual and group screening and threshold tests. Special tests of hearing, loudness, balance, recruitment, tolerance, speech reception, psychogenic deafness and malingering. Supervised practice in administration and interpretation of audiometric tests.

***690. The Pre-School Deaf Child.** Three credit hours. Spring Quarter. Prerequisite, Speech 590.

Study of problems peculiar to the pre-school deaf child.

To be offered in 1957-1958.

694. Speech Disorders Survey. Three credit hours. Autumn Quarter. Prerequisite, Speech 580, 585, and 590. Mr. Moser.

Introduction to the area of disorders of speech. Primary attention is given to the more common speech deviations. Students observe examinations and corrective methods of clinicians in the speech clinic.

695. Speech Pathology I. Three credit hours. Winter Quarter. Lectures, demonstrations, observations. Prerequisite, Speech 694. Mr. Moser.

A continuation of Speech 694 with special consideration of severe voice deviation and articulation disorders, such as cleft palate, cerebral palsy, paralysis, and maxillo-facial injuries.

* Not given in 1956-1957.

696. Speech Pathology II. Three credit hours. Spring Quarter. Prerequisite, Speech 694 and ten hours of Psychology. Mrs. Irwin.

Continuation of Speech 694 with emphasis on psychological aspects of speech disorders, including stuttering, speech retardation, psychogenetic dysphonias, and psychological assessments of speech defectives. Observation of cases in the Speech and Hearing Clinic.

697. Clinical Principles in Speech Correction. Three credit hours. Winter Quarter. Five meetings each week. Prerequisite or concurrent, Speech 694. Mrs. Irwin.

Emphasis on the examination, diagnosis and correction of speech disorders. Observation and explanation of clinical procedures.

698. Clinical Practice in Speech Correction. Two or three credit hours. Spring Quarter. This course may be repeated one time. Five meetings each week. Prerequisite, Speech 695 and 697. Mrs. Irwin.

Clinical practice in Speech Correction. The student will be given opportunity to study and work with a wide range of speech cases in the University Clinic, the Orientation Week Health Line, etc. To make arrangements he should, therefore, if possible, communicate with the department well before the opening of the Quarter.

700. Minor Problems in Speech. One to five credit hours. All Quarters. Conference, library, and laboratory work. Prerequisite, permission of the instructor and the chairman of the department. This course may be repeated for a total of fifteen credit hours.

705. Areas and Techniques of Research in Speech. Three credit hours. Autumn Quarter. Prerequisite, twenty-five hours in Speech. Mr. Knower.

Explanation of the principal areas of graduate research in speech with a review and critical commentary on typical methods of research in each. Discussion of possible future investigations and of the techniques and standards of research used in the several areas. Library, Clinic, and Laboratory facilities. Preparation of bibliographies and research reports.

710. Contemporary Speeches. Three credit hours. Winter Quarter. Mr. Harding.

Analysis and criticism of the speeches of leading American men of public affairs, preachers, and educators, particularly those delivered since World War II. Audience adaptation; rhetorical methods; effectiveness for gaining belief and securing action.

735. Theatrical Criticism. Five credit hours. Spring Quarter. Prerequisite or concurrent, one of the following: English 676, 677, 670. Mr. McDowell.

A survey of critical theories from the Greek to the modern period with particular reference to the influence of the theorists, the church, the state and the press in the development of the theatre. Illustrated lectures will establish the connection between critical opinion and stage practice. Attention will be given to an analysis of dramatic forms and conventions, a study of current newspaper and magazine criticisms with practice in writing reviews, and a consideration of the stage and the movies as art forms.

Not open to students who have credit for Speech 635.

740. Theatre Organization and Management. Three credit hours. Winter Quarter. Mr. Dietrich.

A general analysis of school, college, church, and community theatres and the organization and management of each type. An intensive study of a selected type of theatre by each student. Not offered in 1957-1958.

***743. Children's Theatre.** Three credit hours. Winter Quarter. Prerequisite, Speech 645, 646, or an equivalent. Three class hours and three laboratory hours each week. Mr. Schreck.

Directing and producing plays for children. Improvisations of short scenes. Judging and editing the test. Each student will direct a short play.

Not open to students who have credit for Speech 643.

745. Advanced Theatre Direction and Production. Five credit hours. Spring Quarter. Prerequisite, Speech 646, Speech 627 and 651 are recommended. Mr. Dietrich and senior staff.

Advanced theory and practice of play direction in the modern theatre. Technique of casting, conducting rehearsals, and integrating the elements of production. Class members, under supervision of the instructor, will produce a modern or an historical play for public presentation. Laboratory hours in addition to scheduled meetings.

760. Radio and Television Program Policies. Two credit hours. Spring Quarter. Prerequisite, senior standing. Mr. Summers.

Programming problems and policies of networks and individual stations; basic policies in the handling of political, religious, public affairs and children's programs and of discussion of controversial issues. Influence of public attitudes and of decisions of regulatory bodies on basic program standards.

764. Writing for Television. Three credit hours. Winter Quarter. Prerequisite, Speech 672 and either Speech 654 or Speech 662. Mr. Mall.

Analysis of television script requirements in comparison with those for radio programs. Supervised practice in the writing of television programs.

Not open to students who have credit for Speech 663.

765. Television Production and Directing. Three credit hours. One Quarter. Autumn and Winter. Prerequisite, Speech 672 and Speech 666 or the equivalent. Mr. Mall.

Basic training in the production and directing of television programs; planning of sets, plotting of shows, use of studio equipment, and the supervision of programs through the rehearsal stage.

766. Advanced Television Production and Directing. Four credit hours. One Quarter. Winter and Spring. Prerequisite, Speech 765 and permission of the instructor. Mr. Mall.

Continuation of Speech 765, with emphasis on problems of television program building and on directing television programs.

778. Experimental Phonetics. Three or five credit hours. Spring Quarter. Two one-hour lecture periods and three two-hour laboratory periods each week. Prerequisite, Speech 585, 617, and 678. Mr. Black.

Laboratory investigations of problems of phonetics as they are related to functional speech.

†781. Curricular and Instructional Adjustment for the Deaf Child. Three credit hours. Offered in Summer Quarter only. Prerequisite, Speech 690.

Adaptation of nursery school, kindergarten and elementary methods; planned development of language; silent reading; lip reading; outline of work for each Quarter.

785. Advanced Clinical Practice in Speech Correction, Lip Reading, or Instruction of the Deaf. One to fifteen credit hours. One Quarter. Autumn and Winter. Three hours per week will be devoted to clinical practice for each credit hour. Prerequisite or concurrent: (1) for Speech Correction, Speech 696 and 698, (2) for Lip Reading, Speech 676 and 684, (3) for instruction of the Deaf, Speech 781. Permission of the Director of the Speech and Hearing Clinic is required. Mr. Moser and senior staff.

Clinical experience in examination, diagnosis, and therapy with opportunity for such field experience as may be indicated by the student's training and desire for future professional employment or practice.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ARTS SURVEY COURSES

For description of Arts Survey 605, 608, see Bulletin of the College of Arts and Sciences

† Not given during the academic year 1966-1967.

THE UNIVERSITY SCHOOLS

Office, University School

DIRECTOR KLOHR, COORDINATORS JENNINGS AND COON, SCHOOL PHYSICIAN AMBUEL, ASSOCIATE PROFESSORS HELLER, LOOMIS, MIKELSON, WILLIS, AND WILLIAMS, ASSISTANT PROFESSORS ALBERTY, ALLEN, FRALEICH, MORRIS, ORR, SCHATZ, STEWART, SWALES, TOLBERT, UTTERBACK, AND WILSBERG, INSTRUCTORS AND ASSISTANTS

The functions of the Department of The University School are: to provide a laboratory in which students in the College of Education may observe and study modern secondary and elementary school practice; to provide a laboratory in which certain selected graduate students may do intensive study of the philosophy and methods of modern education; to offer to teachers and administrators of the State of Ohio opportunity for intimate observation of the practices named above; to provide to faculty members in the College of Education opportunity for current observation of children in a school situation, and hence for the securing of abundant and new illustrative material for theory courses. Consequently, special provision is made for study and observation through the services of staff members who act as interpreters to student groups and to visiting school faculties who ask for such services; by the provision in office staff and routine for attention to visitors desiring to observe certain types of students, specific areas of instruction, or designated teachers; through the preparation of typical forms and reports for inspection by visitors; and through lectures by and conferences with staff members. Further service is given through published reports, exhibits of student work, and certain student-written publications. The School affords an opportunity for a limited number of teachers from the field and graduates without experience to work in the School as "assistants." Teachers interested in such "assistantships" should address an inquiry to the Director of the University Schools.

VOCATIONAL EDUCATION

(See Education)

WELDING ENGINEERING

Office, 128 Industrial Engineering Building

PROFESSORS R. S. GREEN AND McMASTER, ASSOCIATE PROFESSOR McCAULEY, MR. FOUST (EMERITUS), MR. W. L. GREEN, AND ASSISTANTS

‡415. Forging, Heat Treating, and Welding. Three credit hours. One Quarter. Winter and Spring. Six hours of laboratory and lecture each week. Practice in the principles of heat treating; oxyacetylene and electric welding.

The work in this course is designed to aid students preparing to teach industrial arts, to achieve skills, procedure and information necessary for teaching these subjects at the secondary level.

Safety glasses must be worn in the laboratory. See footnote.

Not open to students who have credit for Welding Engineering 418.

‡ Credit shall not count toward graduation.

‡ Courses Industrial Engineering 404, 405, 419, 420, 421 and Welding Engineering 415, 418, 701, 702, 703, 739, 741, and 742 require the use of a pair of safety glasses; however, each student need own only one pair for all courses. In the event that the student must have prescription lenses, he shall obtain his safety glasses during the Quarter preceding this first use. This may be done through the Optometry Clinic, Room 15, Optometry Building, or through any registered optometrist.

These glasses are also a requirement in certain other courses involving shop laboratory work, inspection trips, and similar activities.

ZOOLOGY AND ENTOMOLOGY

Office, 101 Botany and Zoology Building

PROFESSORS D. F. MILLER, CUTRIGHT, DeLONG, GREEN, KOSTIR, LANGLOIS, J. A. MILLER, C. R. NEISWANDER, R. B. NEISWANDER, PETERSON, PRICE, RIFE, SLEESMAN, ASSOCIATE PROFESSORS BORROR, DAVIDSON, DUNHAM, FISK, HAUB, KNULL, J. N. MILLER, PADDOCK, POLIVKA, PUTNAM, REESE, RINGS, TIDD, VENARD, ASSISTANT PROFESSORS BRITT, GILTZ, JOHNSON, GOOD, MYSER, PLAINE, ROLSTON, WEAVER, INSTRUCTORS CRITES, FRANKLIN, KIRLIN, AND ASSISTANTS

ZOOLOGY

401-402. General Zoology. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Five lecture-laboratory periods each week. Staff and assistants.

A course intended to give the student a general view of the nature of animal life and to point out its relation to man's economic and social activities. The chief topics considered are as follows: nature and structure of living substance, food and its energy transformations, the essentials of reproduction; a review of the animal groups with special stress on useful and harmful qualities; animal distribution and relation to environment; heredity and evolution with particular stress upon their relation to human affairs.

403. General Principles of Heredity. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lectures each week. Prerequisite, Zoology 401-402 or Botany 401-402 or equivalent. Mr. Rife, Mr. Green, Mr. Paddock, Mr. Plaine.

An introductory study of the principles of heredity for students planning to major in biological sciences or to enter allied professional fields such as agriculture, medicine, or veterinary medicine. Demonstrations of living animals and plants are frequently used. The implications of genetic principles for an understanding of development, physiology, anatomy, and plant and animal breeding are discussed.

508. Ornithology. Three credit hours. Spring Quarter. One lecture, one laboratory period, and one field trip each week. Prerequisite, Zoology 401-402 or ten hours of biology. Mr. Putnam.

A study of the general biology and classification of birds, with emphasis on the field identification of local species. Field trips on Saturdays.

Not open to students who have credit for Zoology 408.

509. Evolution. Five credit hours. Spring Quarter. Five lecture-discussion periods each week. Prerequisite, Botany 401-402 or Zoology 401-402 or equivalent. Mr. Tidd.

The principles of organic evolution. Demonstrations and discussion of the facts and theories underlying the evolution of man and other living things.

512. Heredity and Its Human Relations. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lectures each week. Mr. Rife.

A course especially designed for students who do not intend to major in the biological sciences. A study of the inheritance of physical and mental variations in human beings, and their distributions in different populations. The interaction of heredity and environment is given careful consideration, and a scientific basis is laid for the study and analysis of racial variations. Analysis and comparisons of individual variations within the students in the class are made, including such traits as blood groups, dermatoglyphics, and handedness.

Not open to students who have credit for Zoology 412.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

603. Fundamental Genetics. Five credit hours. One Quarter. Autumn and Winter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Zoology 401 and 402 and Botany 401 and 402 or equivalent, and at least 15 Quarter hours of credit in any one or more of the following: chemistry, physics, and mathematics. Mr. Plaine.

For all students planning to specialize in genetics (plant or animal) or in the application

of genetics to their area of specialization. Lectures are devoted to discussions of the basic experiments, principles, and concepts of theoretical and applied genetics. Laboratory work consists of breeding experiments with *Drosophila* and *Neurospora*.

605. Animal Behavior. Three or five credit hours. Autumn Quarter. Two lectures and four or six laboratory hours each week. Prerequisite, Zoology 401-402 and ten additional hours of biological science. Mr. J. A. Miller.

This course is devoted to the study of the neurological basis of animal reactions with emphasis on the mechanics of adjustment to heat, light, chemical and mechanical stimulation.

609. Animal Microtechnic. Five credit hours. Spring Quarter. Primarily a laboratory course with discussion and assigned readings. Prerequisite, at least three Quarters' work in chemistry and at least twenty hours in biological science. The class is limited to twelve students and permission of the instructor must be obtained before registering for the course. Mr. Kostir, Mr. J. N. Miller.

The theory and practice of microscopic methods, including fixing, imbedding, sectioning, mounting, and staining of animal tissues, and the effective use of modern microscopes and their accessories.

617. General Cytology. Five credit hours. Winter Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, at least three Quarters' work in chemistry and at least twenty hours in biological sciences. Permission of the instructor must be obtained before registering. Mr. Kostir.

A study of the nature of protoplasm, the inner organization of living cells, and the fundamental phenomena of life.

618. The Cytological Basis of Genetics. Five credit hours. Winter Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisite, Zoology 603 or the equivalent. Mr. Paddock.

The correlation between the principles of genetics and the behavior of chromosomes, documented by examining cells under oil immersion during mitosis and meiosis in a variety of organisms.

620. Advanced Zoology of Vertebrates. Five credit hours. Spring Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Zoology 401-402, or equivalent. Zoology 509 and one Quarter in comparative anatomy are also desirable. Mr. Price.

A study of the various vertebrate groups, emphasizing their origin, phylogeny, classification, life histories, habits, distribution and economic importance. Laboratory, museum, and field work. Especially recommended for students specializing in biological science.

625. Advanced Zoology of Invertebrates: The Protozoa. Five credit hours. Autumn Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Zoology 401-402 or equivalent. Mr. Kostir.

Zoology 625, 626, 627 are fundamental courses designed to give the student a general knowledge of the structure, activities, life histories, and relationships of the invertebrate animals. It is not essential that these courses be taken in any particular order, and any one of the three may be elected independently of the others. Course 625 deals with the structure and activities of the protozoa, including both free-living and parasitic forms.

626. Advanced Zoology of Invertebrates. Five credit hours. Winter Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Zoology 401-402 or equivalent. Given in alternate years. Mr. Kostir.

A study of the structure, activities, life histories, and relationships of sponges, coelenterates, lower worms, and annelids, together with the consideration of important biological principles illustrated by these groups. Note statement under Zoology 625.

***627. Advanced Zoology of Invertebrates.** Five credit hours. Winter Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Zoology 401-402 or equivalent. Given in alternate years. Mr. Kostir.

A study of the structure, activities, life histories, and relationships of arthropods, molluscs, echinoderms, and other groups, together with the consideration of important biological principles illustrated by these. Note statement under Zoology 625.

629. Mammalogy. Three credit hours. Winter Quarter. Three two-hour lecture-laboratory periods each week. Prerequisite, Zoology 620 or its equivalent. Mr. Good.

A study of mammalian comparative morphology, taxonomy, life histories, habits, distribution and economic importance. The world fauna is reviewed, with special emphasis upon mammals of the United States and particularly of Ohio.

634. Biology of Birds. Three credit hours. Winter Quarter. Two lectures and one laboratory period each week. Prerequisite, Zoology 408 or equivalent. Mr. Putnam.

This course deals with structural and physiological characters of birds, migration, reproductive behavior, territory, ecology, problems of bird populations, and techniques of studying birds. The course is designed for majors in vertebrate zoology, ornithology, wildlife conservation, and ecology.

NOTE: TEACHING COURSES. For the Teaching Course in this department, see the Department of Education, Course 683.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department, see the Bulletin of the Graduate School.

ENTOMOLOGY

550. General Entomology. Five credit hours. One Quarter. Autumn and Winter. Five lecture-laboratory periods each week. Mr. DeLong, Mr. Borror, Mr. Fisk.

An introductory course dealing with the general characteristics of insects, and the biology and habits of the more important orders and families.

Not open to students who have credit for Zoology 450.

566. Horticultural Entomology. Five credit hours. One Quarter. Autumn and Winter. Five lecture-laboratory periods each week. Prerequisite, Entomology 550. Mr. Davidson.

Designed for students specializing in the Department of Horticulture. A study of the characteristics, biology, ecology, and control of the insect pests attacking ornamental shade trees and shrubs; orchards and small fruits; and vegetable and greenhouse crops. Field and laboratory studies will be made on recognition of types of injury, the stages of the insect causing it, and the preparation and application of the proper remedial measures.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

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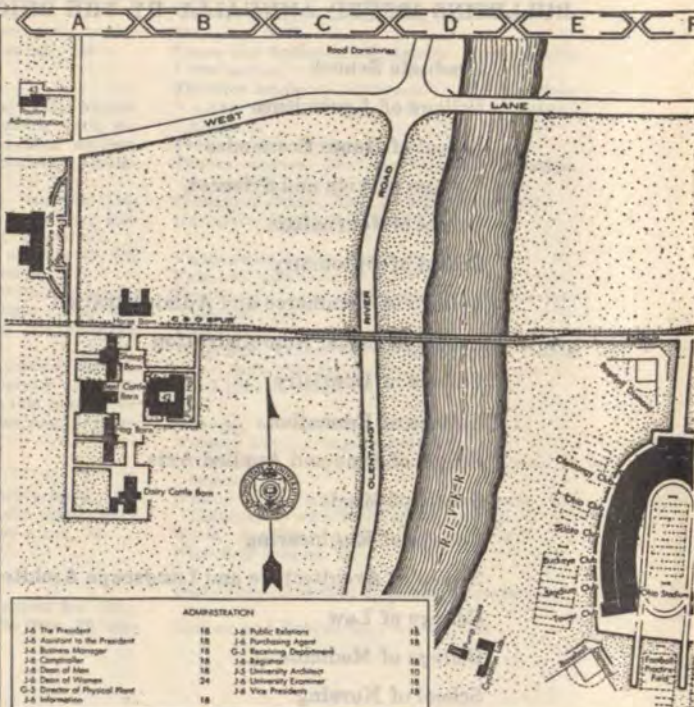
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